Texas Facilities Site Risk Characteristics

TEXAS FACILITY ASSESSMENTS	Comments– For All Texas Facilities Reviewed ; Except Where Indicated Otherwise
SITE LAYOUT / FIRE DIVISION	Spacing between building and other properties is well laid out. Congestion is considered light to moderate for the Orange Yard and light for the other Yards. An incident should be contained to the area of development, i.e. specific equipment area. The exception would be the accumulated loss related to a weather event. Typical runoff drainage is to the water way adjacent to the property or waterways. Generally the topography is flat with approximately 3 to 10 feet elevations from waterways. These operations do not require extensive piping or liquid handling systems.
CONSTRUCTION	A full listing of buildings construction and occupancy is provided in the Appendix. Building structures are mostly non combustible construction for the principle fabrication, repair and storage buildings. The buildings range in age from 5 to 60 years old. Each area is considered a separate fire division with a large single fire or equipment failure limited to one building area. Facilities are built in accordance with Insurance/ASME/Building codes for windstorm/temperature extremes/flooding/hurricane potential anticipated for geographic area based on the date the building was constructed. Computer controlled cutting machines are used in the Fabrication Shop. Equipment is controlled by the crafts person operating the machine with typical safety shutoff systems. The equipment does not operate unmanned. Emergency shut off "kill switches" are specific to the equipment being used such as welders, cutting machines, etc. There is no significant use of liquid storage tankage at the facilities. Vehicular protection is provided for above ground systems. Primary roads and parking areas are paved.
LOADING/ UNLOADING	Receipt of raw materials and distribution of products can be performed by truck or marine vessel. Bulk receipts would be plate steel and equipment and parts associated with rig work. Fabricated onshore components are transferred by crane for attachment to the rigs. Large lifts are performed by a crane. The large potential for loss would be either a heavy dropped load or crane incident.
OTHER STORAGE	Warehouse storage is provided at each site. These are typical heavy steel frame buildings with sheet metal exteriors. Metal racks inside primarily store metal parts and consumables. Combustible loading in the building is considered less than moderate and primarily light. For the locations under repair from Hurricane Ike (North/South Yards), storage is minimal. Each warehouse is considered a single fire area.
OPERATIONS/ PROCESS	These operations primarily handle the fabrication, retrofit and repair of heavy metal fixtures and equipment associated with offshore drilling rigs and associated structures. With the exception of the warehouses and offices, the majority of the principle buildings are considered metal working occupancies in which metal is the basic material involved in the manufacturing/fabrication of attachments or portions of drilling rigs or similar marine style objects. This includes occupancies typical to machine, metal working, cutting & welding, assembly metal and metal repair shops. Cranes and barges are used to accomplish marine vessel work. Typically, module fabrication and repair is preformed at the Orange Yard and then transported to one of the other yards for installation. The Dock Yard is mostly for assembly on marine vessels which are staged on the drydock. Any appreciable amount of fabrication would be performed at the Orange Yard and barged to the drydock for installation on the rig or ship located on the drydock. Incidents related to this occupancy should be specific to specific equipment failure, crane failure, dropped load, marine vessel collision at dock or small building fire due to electrical equipment.

TEXAS FACILITY ASSESSMENTS	Comments– For All Texas Facilities Reviewed ; Except Where Indicated Otherwise
FIXED ELECTRICAL SYSTEMS	Main power is supplied by a local power authority and is considered reliable. The facilities require power to operate. Backup power can be provided to run portions of the operation. Each location has small to moderate size transformers which are not unique and not owned. The electrical systems at Dock, North and South Yard are minimal compared to the Orange Yard. Due to severe flooding during Hurricane Ike, many of the electrical systems, e.g. wiring, relays, switchgear, motors, etc., were exposed to brackish water and were repaired. Improvements are currently ongoing at the Orange Yard to relocate major electrical conduit from previous lower build elevations to 12 feet or higher throughout the facility. This modification is based on lessons learned from previous record high flooded elevations of 8-10 feet. In addition, portable electrical equipment has been modified to allow for elevation prior to tropical storm and electrical substations damaged during previous storms have been rebuilt on elevated platforms.
UTILITIES	Other typical utilities include compressed air provided by small portable equipment and domestic water provided from the public system. Natural gas is used from a piped local provider. Liquid carbon dioxide and oxygen are stored in tanks in a segregated outside area and used for welding and cutting processes. Numerous Miller 8 Bank welding machines are provided throughout for the Orange Yard.
MAINTENANCE, REPAIRS & INSPECTION	The maintenance and inspection systems at the Texas facilities are similar to Pascagoula. The programs are overseen by Signal Corporate in Pascagoula. The maintenance department is comprised of multiple highly qualified crafts: electrical, welder tool worker, and instrumentation. The department at the site handles the majority of day to day maintenance activities, which are primarily duties related to metal fabrication. Larger projects are completed by qualified contractors. Inspection, testing, and maintenance frequencies are established using manufacturers' recommendations and industry guidelines. Non-destructive examination (NDE) techniques are utilized as necessary for structural and piping integrity inspections. Overall, the programs are established and use written records maintained for equipment and procedures. The maintenance system is run by a ticket system. The majority of historical records at these facilities were destroyed during Hurricane Ike. The facility is in the process of converting over to a computerized records system. No specific date for completion of a record system was indicated. The site has practices and procedures in place to maintain fire protection systems for systems and equipment. The program utilizes training, procedures, inspections and tests, deficiency corrections, and quality assurance. The maintenance program uses a combination of preventive and predictive maintenance techniques.
CONTRACTORS	The site does use some resident contractors. The Orange Yard previously had residential quarters similar to the East Yard facilities. The use of residential quarters has been discontinued and facilities removed. Specialized contractors are used for large special jobs depending on the current work projects. Onsite training and supervision is provided on a specific task basis for contractors.
OPERATIONS	Operational procedures are used for major equipment operations. Best Practice between the Mississippi and Texas locations are used as a guide per corporate directives. Operating procedures are written and available for typical operations. Formal training for new and existing employees, competency testing and certification; refresher training; safety and technical training are provided. Facility personnel involved in hazardous waste management, such as storage of off spec product and response to emergencies, complete a program of classroom instruction or on the job training that teach

TEXAS FACILITY ASSESSMENTS	Comments– For All Texas Facilities Reviewed ; Except Where Indicated Otherwise
	them to perform their duties.
WORK PERMIT	A work permits system is in place for welding, work order, lockout/tagout, confined space, etc. On major jobs blanket permits are typically given. Areas typically considered a welding occupancy do not require permitting.
HOUSEKEEPING	Critical areas were clear and non-congested with idle material or equipment. There was some congestion in areas being used as a staging area for equipment relocated due to area repairs from the recent hurricane. This staging is temporary.
EMERGENCY RESPONSE	The local fire department and local police are the emergency response for the facilities. A written emergency procedure coordinated with local fire department is in place under the existing. The site has excellent emergency preparedness program and procedures for hurricanes.
FIRE BRIGADE RESPONSE	The site provides typical hazardous material response coordination. The site is considered an incipient emergency response. Fire response for the facility is considered reliable. Access to the facility is considered good.
MANUAL FIRE EXTINGUISHING	Hand and wheeled fire extinguishers are located throughout. Fire water is provided by the public water system. An onsite distribution system is provided. Hydrants are distributed on the property. The site is connected to the City of Orange fire water system. Fire water systems are not provided at the Dock, North or South Yards. Firewater could be gotten by responding fire departments from adjacent waterways. The level of fire protection at these facilities is considered acceptable.
FIRE PROTECTION	Sprinkler systems are not provided at this site. Buildings that are combustible are of small value. Fire hydrant protection is provided. Local alarm smoke detectors are provided in selected areas of the Orange Yard, which is occupied in the main areas at all times.
EXPOSURES	The Orange Yard is surrounded in three directions by the Sabine River. Several hundred yards to the north are residential sections of the City of Orange, Texas. The DockNorth and South Yards are bordered on one side by the Sabine River and to all other sides by open areas for several hundred yards. The Yards are exposed to potential water surge from adjacent water ways and flooding from severe tropical storms. This is further discussed in the storm analysis report section.
INTRUSION ARSON / TERRORISM	The portions of the property accessible to the public are fenced with access by a 24 hour manned gate. The facilities are accessible from an immediate public road. Vandalism or malicious mischief has not been a problem in past years. Good exterior and perimeter lighting is provided. The Orange facility is manned and in operation continuously.

Loss Estimate Discussions

The identification of potential loss estimates is based on experience and calculations. The loss estimates are representative of the type of consequences possible in a facility such as described within this report. This study only covers the aforementioned facility. All damage and loss potential figures presented pertain to property damage caused directly by mechanical breakdown, fire and/or explosion. These figures do not specifically include fixed costs, other secondary damages, such as pollution or debris removal ensuing subsequent to the events described. All property loss estimate values are reported as Replacement Cost Values (RCV), unless otherwise indicated.

The concepts used for loss estimating in this study are for risk management purposes and represent the loss potential related to mechanical breakdown, fire and explosions of various intensities. While the models selected are believed to be reasonable for the situation, the results are not considered to be absolute. The loss estimates should be utilized only as an indication of the extent or order of magnitude of the potential consequence. The actual consequences may be more or less severe than the reasonably foreseeable conditions that were used in this study.

The loss estimates are categorized as probable maximum (PML) and maximum foreseeable (MFL) loss estimates. The incidents and dollars ranges assigned to each loss estimates are meant to represent any loss which could occur in this dollar range as it relates to physical or time element delay loss.

The largest physical asset or time element loss anticipated at this site would generally be related to:

- Mechanical damage of large valued object due to collapse, collision or failure during operation, maintenance or installation;
- Fire and explosion of energized electrical system or component;
- Fire and explosion related to the use of fired equipment or equipment under pressure;
- Dry dock sinking or collision; and
- Accumulated loss due to a weather event, e.g. Gulf of Mexico tropical storm.

The following discussion of loss types establishes, and is intended to demonstrate creditable types and consequences of events which have historically been evaluated for exposure to facilities.

Loss Estimates

Probable Maximum Loss (PML)

This assumes that the initial mechanical failure, fire or/and explosion results in a loss or failure of the immediate equipment instrumentation, detection or suppression facilities, but that within a reasonable time, the secondary defenses such as instrumentation shutoff systems, firewater facilities, shut-off valves etc., operate properly. With respect to construction, the incident would be related to collapse or failure of constructed systems or fire related to an initial startup or testing of equipment. This type of loss description would be representative of the types of loss most probable to occur to these facilities, based on industry experience. The PML accounts for the normal worst possible loss under existing conditions, with the existing protective systems and response features adequately working.

Business interruption (BI) is not considered a significant exposure under the PML loss due to the redundancies in operation within and between Yards for accomplishing work.

The following table of loss estimates is categorized as probable maximum loss (PML). The incidents and dollar ranges assigned to each loss estimate are meant to represent any loss (fire/explosion/mechanical breakdown and ensuing BI) which could occur in this dollar range as it relates to physical or time element delay loss.

Table 9: PML Loss Estimates

PML Location	Scenario 1 (S1)		Scenario (S2)		
	PD	BI* Months	PD	BI* Months	Scenario Description (BI is 100% for duration of area impacted)
East Yard	<$1,500,00	2	<$1,500,000	3	S1 - Administration Bldg or Resident Housing Fire; S2 - Gantry crane collapse with dropped heavy object.
West Yard	<$500,000	2	<$1,200,000	3	SI - Training Building Fire; S2 - Gantry crane collapse with dropped heavy object.
Orange Yd	<$500,000	2	<$1,500,000	3	S1 - Building Fire; S2 Crawler Crane Incident with dropped heavy object.
Dock Yard	<$150,000	2	<$1,500,000	3	S1 - Warehouse Incident Fire; S2 - Equipment failure, collapse or dropped heavy object dry dock.
North Yard	<$150,000	2	<$500,000	2	S1 - Building damage due collapse or collision with vehicle; S2 - Damage at bulk head due to collision.
South Yard	<$150,000	2	<$500,000	2	S1 - Building damage due collapse or collision with vehicle; S2 - Damage at bulk head due to collision.

Maximum Foreseeable Loss (MFL)

The MFL considers the largest loss that could result from a single incident at the site. This situation assumes that the initial incident is so large that the active protection systems are rendered inoperative and only the passive protection facilities, such as spacing between exposure areas, are effective. This type of loss description is a worst case scenario, one of

extremely low probability and frequency based on previous industry experience.

The maximum foreseeable loss (MFL) for these facilities is estimated based on major equipment failure due to structural collapse, major building or groups of building on fire, or major equipment failure related to cranes, dry dock or heavy lifting equipment, with the potential for damages to adjacent equipment and building areas.

The following table of loss estimates is categorized as maximum foreseeable loss (MFL). The incidents and dollar ranges assigned to each loss estimate are meant to represent any loss (fire/explosion/mechanical breakdown and ensuing BI) which could occur in this dollar range as it relates to physical or time element delay loss.

Business interruption (BI) in most cases should be mitigated to some extent because of multiple redundancies between facilities. For instance, both the Texas and Mississippi operations have dry dock installations, which could be used for the others work. However, a time cost would be associated with schedule changes and transportation of work activities between Yards. The same applies for many of the work services between the East Yard and Orange Yard which have many common work capabilities which are redundant.

Table 10: MFL Loss Estimates

MFL Location	Scenario 1 (S1)		Scenario (S2)		
	PD	BI months	PD	BI months	Scenario Description (* BI considered in PD total, most likely minimal)
East Yard	<$2,500,00	*	<$20,000,000	100% 18 months	S1 - Administration Bldg or Resident Housing Fire; S2 - Gantry crane collapse with dropped heavy object; loss of Dual Carrier results in 100% loss of business income associated with use of dry dock.
West Yard	<$1,500,000	*	<$2,500,000	100 % 2 months	S1 - Training Building Fire; S2 - Major damage to crane, with dropped heavy object and adjacent area damage; BI associated loss related to specific project using equipment.
Orange Yard	<$1,500,000	*	<$5,750,000	*	S1 - Building Structure Incident due to collapse and adjacent area damage; S2 - Major crane failure in building dropping major lift of heavy object.
Dock Yard	<$275,000	*	<$5,000,000	100% 12 months	S1 - Warehouse Incident Fire ; Structural Failure S2 - Major Dry Dock Equipment failure , structural failure or dropped heavy object dry dock; loss of dry dock results in loss of facility use.
North Yard	<$275,000	*	<$1,500,000	100 % 1 month	S1 - Building damage due to collapse and adjacent area damage complete loss; S2 - Major damage at bulk head due to collision; options available to conduct work at other location to mitigate BI for use of bulkhead area.
South /Yard	<$275,000	*	<$1,500,000	100 % 1 month	S1 - Building damage due to collapse or collision with vehicle; S2 - Major damage at bulk head due to collision; options available to conduct work at other location to mitigate BI for use of bulkhead area.

Natural Hazard Loss Estimates

The largest natural hazard exposures from weather events, which could cause substantial damage to the Yards due to the effects of water and wind could result from aftereffects of a Gulf of Mexico hurricane and tropical storm and flooding due to water surging in adjacent waterways. For these facilities, the accumulated effects from a direct hit of a major hurricane are considered. For other natural hazards such as tornado, earth quake or freezing weather; the frequency of tornados specific to each area is low the facilities are located in low seismic areas; and freezing weather is possible but low frequency. The events are considered either low frequency or low financial exposure events when compared to the potential accumulated impact of flooding and winds. Further discussion of natural hazard exposure and loss estimates are described in the Wind and Water Surge Analysis section of the report.

Recommendations/Observations

There were no major recommendations developed from this review. Previous insurance recommendations are reported for historical purposes and are not considered major recommendations.

Previous Recommendations

The following recommendations were presented in 2003 under the Ownership identified as ACORN.

02 - 1 Fire Protection System Inspection and Testing

It is recommended that sprinkler, special extinguishing systems and alarms testing for the buildings are contracted out for inspection and testing per NFPA requirements. This includes the following areas:

Mississippi East Yard Office Building
Mississippi West Administration Building (Leased and Insured by others)
Mississippi West Training Buildings
Port Arthur Administration Office Building at Jefferson Shopping Center (No longer owned)

In addition, if not already provided, all alarm for detection and protection systems should alarm to a constantly attended location.

SHAI Comment: Inspection and testing has been implemented as recommended. The Port Arthur offices are no longer owned.

02 - 2 Management Programs

The site has indicated that under the new ownership and management the best practices used at the Mississippi and Texas sites are to be implemented. Follow-up should be conducted to ensure proper implementation has occurred of these programs by the authority having jurisdiction under the insurance program.

SHAI Comment: Best practices have been implemented for and directed by corporate operations located at the Pascagoula East Yard for both the Mississippi and Texas facilities.

Wind and Storm Surge Analysis (Additional information is provided in the Appendix)

The purpose of the wind and storm surge loss assessment portion of the report is intended to provide loss estimates of property damage and business interruption for the Signal International facilities located along the United States Gulf coast as it relates to exposure to wind and water surge conditions related to severe tropical storms and hurricanes.

Analysis Summary

This tropical storm wind and storm surge loss estimates are developed for risk management purposes only. The results of this study model hypothetical scenarios and worst-case tropical storm/hurricanes that could reasonably be expected to occur based on historical information. The scenario tropical storm/hurricane exposure for each facility is postulated to affect the largest cumulative concentration of Signal International asset property values for each facility evaluated. Therefore the results are postulated as the potential damage estimate from a single tropical storm/hurricane event, at each facility.

To determine the potential loss estimates, a combination of historical hurricanes over the past 100 years in combination with water surge flooding effects resulting from such events where reviewed. Results of this review provide a range of anticipated damages which could result from modeling hypothetical, worst-case hurricanes that could be reasonably expected to occur in each area. These results should not be considered conservative, as they are based on the best available information on hurricane and flooding damage to date. As time goes on, historical results shall change to reflect the best knowledge which could be expected from those future events. Therefore, damages could be higher if the methods used in this review where recalculated to reflect those future events. It should be noted as further discussed below that Signal has experienced damage from hurricanes from which their experience gained with lessons learned. As a result, improvements to the facilities should assist in mitigation of future events.

The results shown below are from the tropical/hurricane wind and storm surge risk assessment analysis for Signal International.

The Natural Hazard Loss Estimates were determined, as listed in the table below, from water and wind effects of a hurricane.

Table 11: Wind and Water Surge Loss Estimates

Facility	PML Hurricane PD*	Surge*	Total NDLE PML PD*	Total NDLE BI PML 100%	MFL Hurricane PD/BI*	Surge*	Total NDLE MFL PD*	Total NDLE BI PML 100%
Port Arthur Dock	0.856	0.0428	0.8988	30 days	1.07	0.1284	1.1984	3 months
Orange	6.825	0.91	7.735	14 days	9.1	1.82	10.92	3 months
Sabine South	0.348	0.0174	0.3654	30 days	0.435	0.0522	0.4872	3 months
Sabine North	0.228	0.0114	0.2394	30 days	0.285	0.0342	0.3192	3 months
Pascagoula West	1.425	0.076	1.501	30 days	2.85	0.152	3.002	3 months
Pascagoula East	9.62625	0.5134	10.13965	14 days	19.2525	1.0268	20.2793	3 months

NDLE = Natural Disaster Loss Estimate; PD = Property Damage; PML = Probable Maximum Loss Estimate; BI = Business Interruption; MFL Maximum Foreseeable Loss Estimate

*= Million Dollars

Analysis Description

A major tropical/hurricane event can potentially be very destructive. Major tropical storms and hurricanes develop in the tropical ocean regions from June to November each year and can expose significant danger to industrial property and operations. Destructive forces result from a combination of wind-induced, rainfall and storm surges damage.

This wind and storm surge loss assessment is intended to provide loss estimates for property damage and business interruption from historical and stochastic (hypothetical) tropical storm/ hurricanes for Signal International.

Loss estimates are provided for each facility reviewed in this document and for the single largest cumulative exposure for each facility during a single storm event.

The analysis of both historical and stochastic hurricane storm track scenarios that would constitute worst-case wind and storm surge damage conditions for the Signal International facilities along the United States Gulf coast are considered.

All of the known historical storms and a number of stochastic storm paths were analyzed. Only the worst-case (highest loss estimate), cumulative, single-event results are described in this report.

Definitions

Saffir-Simpson Hurricane Scale – A 1 to 5 category rating based on the intensity of a hurricane. The rating takes into account wind speed, central pressure, storm surge height, and coastal destruction potential. Wind speed is the determining factor in the rating. Storm surge is a lesser factor because its value is highly dependent on the slope of the continental shelf in the landfall region.

Category Rating:

Category 1 – Winds 74-95 mph, storm surge 4-5 feet above normal.
Category 2 – Winds 96-110 mph, storm surge 6-8 feet above normal.
Category 3 – Winds 111-130 mph, storm surge 9-12 feet above normal.
Category 4 – Winds 131-155 mph, storm surge 13-18 feet above normal.
Category 5 – Winds >155 mph, storm surge >18 feet above normal.

Storm Surge – a large dome of water often 50 to 100 miles wide that sweeps across the coastline near the point where a hurricane makes landfall. The stronger the hurricane and the shallower the offshore water, the higher the surge will be. The National Weather Service forecasters model storm surge using the "Sea, Land and Overland Surges from Hurricanes" (SLOSH) models.

A storm surge, and perhaps a high tide, can cause already rain-swollen rivers to back up and flood.

Tropical Storm / Hurricane History & Exposure

The largest natural hazard exposures from weather events, which could cause substantial damage to the facilities, would be due to the effects of water and wind. These effects could result from aftereffects of a Gulf of Mexico hurricane and tropical storm and flooding due to water surging in adjacent waterways. Damage occurs from this exposure to assets and cause delays to production due to lack of services for repair to damaged areas.

Based on recent history, Signal International locations have experienced damage from Hurricane Katrina (2005) at its Pascagoula facilities, East and West Yards and from Hurricane Ike (2008) at the Texas facilities along the Sabine River.

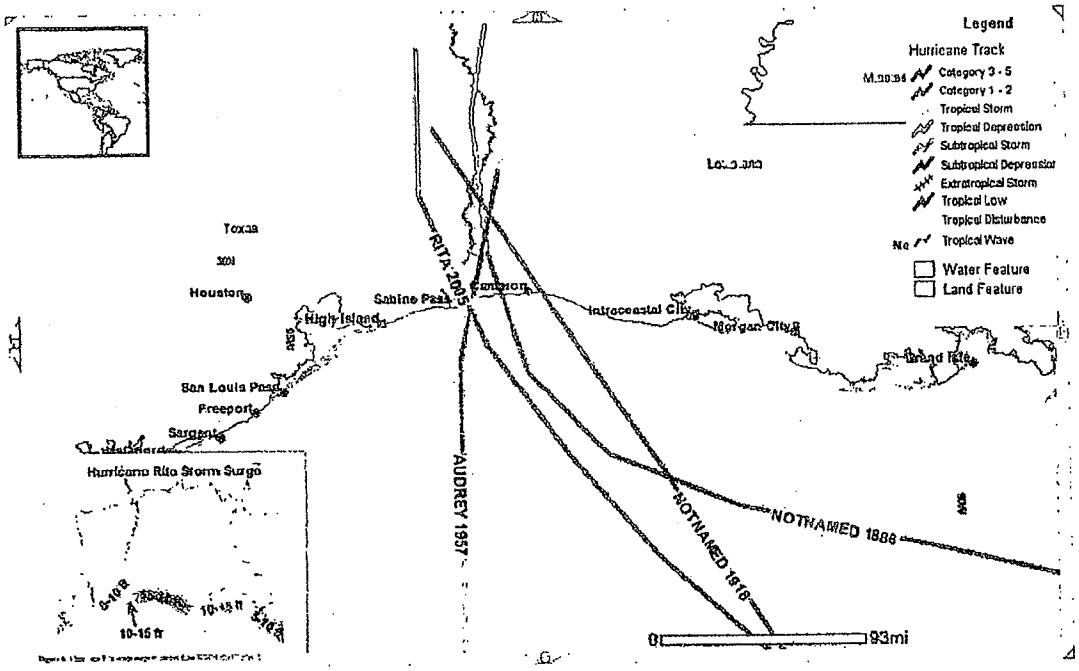
Texas Facilities

History has demonstrated that the hurricane season presents a serious threat to activities in the Sabine Pass Channel and Port Arthur area. This area been affected by tropical cyclone

activity at an average frequency of 0.9 events per year during the 109-year period 1871-1979.

The hurricane season along the Gulf Coast is late May through early November. According to the US Navy, during the 109-year period from 1871 through 1979 there were 101 tropical cyclones that were within 180 nautical miles of Port Arthur, an average of about 0.9 per year. There have been 4 significant hurricanes exposed to this area (within 65 miles) in recorded history, of which 2 where Category 3 (including Hurricane Rita 2005) and 1 Category 4-5 (Hurricane Audrey). During the most recent hurricane in 2005 (Rita), peak gust winds between 99 and 120 mile per hour were experienced and surge conditions up to 9.4 feet above mean sea level in the general area of Port Arthur. In addition, Hurricane Ike (2008) was a Category 2 hurricane when it hit landfall, however, it was a Category 3- 4 prior to landfall. Ike caused significant wind, surge and flooding effects to the Sabine River area including Signal's Texas facilities.

Figure 8: Historical Hurricane Track Storm Surge Data (www.maps.csc.noaa.gov/hurricanes/)(Note (Hurricane Ike is not included in this data).



Based on the history of this region, this area is considered a moderate exposure to hurricane activity, primarily due to the frequency of significant events based on historical data. However, history has shown that the Port Arthur area is vulnerable to the occurrence of destructive storm surge associated with tropical cyclones. The vulnerability of the area has been proven by three storms, Hurricane Audrey in June 1957, Hurricane Carla

(Category 5) in September 1961 and Hurricane Ike (Category 2; 4 prior to landfall) in September 2008, which directly impacted Texas to the west of this location. Audrey, which moved inland some 16 miles east of the Sabine Pass, was one of the most severe hurricanes to strike the coast of the United States in the month of June. It generated a surge of 9.4 ft above MSL at the Sabine Pass. Several lives were lost, and over 1.5 million dollars of damage was suffered in the area. Hurricane Carla, the largest storm to strike the Texas coast since 1900, crossed the coast approximately 200 miles southwest of Sabine Pass; surge heights of 9.4 ft above MSL at Sabine Pass were recorded. During Hurricane Ike, surge heights were reported between 14 to 15 feet along the Sabine River in the area of the Signal properties. Eight feet of water was reported above ground level in Orange, Texas where the Orange Yard is located.

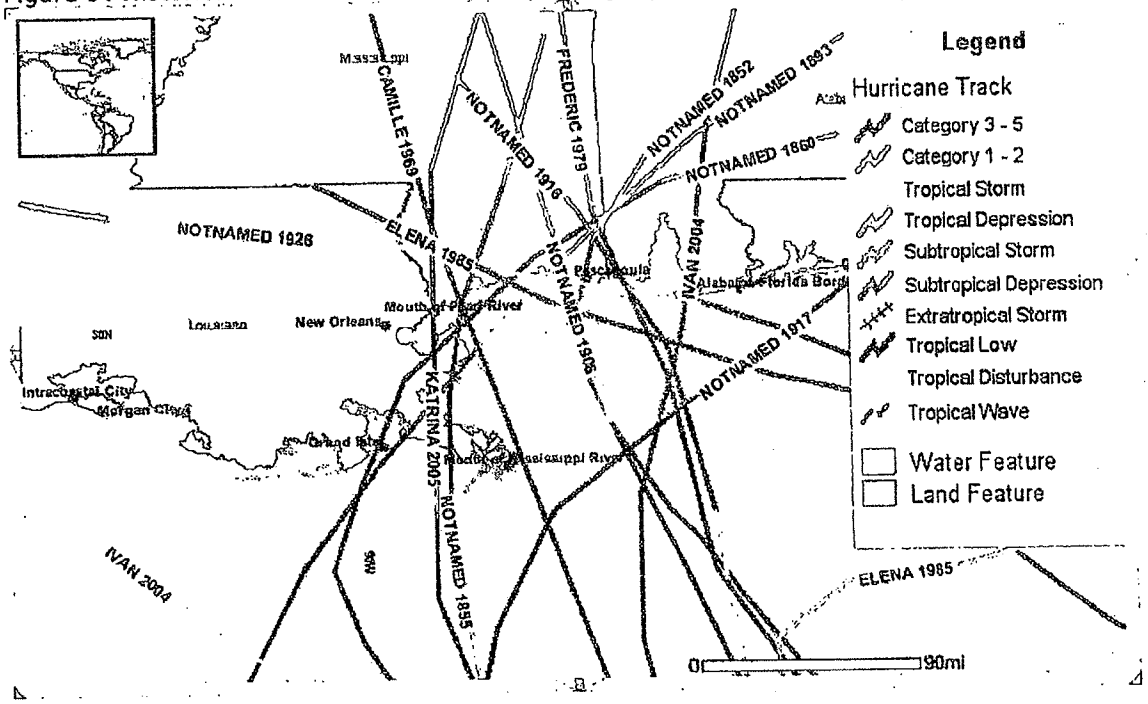
Hurricane Ike was the third most destructive hurricane to ever make landfall in the United States. By the early morning hours of September 5, Ike was a Category 4 hurricane, with maximum sustained winds of 145 mph (230 km/h). Ike had the highest Integrated Kinetic Energy (IKE) of any Atlantic storm in history. IKE is a measure of storm surge destructive potential, similar to the Saffir-Simpson Hurricane Scale, though the IKE is more complex and in many ways more accurate. On a scale that ranges from 1 to 6, where 6 is the highest destructive potential, Ike earned a 5.6 on September 11 at 12:30 p.m. EDT. In comparison to Ike, hurricanes Katrina and Wilma, both from the 2005 Atlantic hurricane season peaked at 5.1. Had Ike made landfall as a Category 3 or higher, the hurricane would have likely had a record breaking storm surge and the potential for damage could have been worse than what was seen with Hurricane Katrina. However, Ike made its final landfall in Baytown, Texas, United States as a Category 2 hurricane. In the United States, 82 people were killed, and 202 are still missing. Damages from Ike in US coastal areas are estimated at $27 billion (2008 USD), with additional damage of up to $4 billion in Cuba, and $500 million in the Bahamas, amounting to a total of $31.5 billion in damages for the United States, Cuba, and the Bahamas alone. Ike was the third costliest U.S. hurricane of all time, behind Hurricane Andrew of 1992 and Hurricane Katrina of 2005.

Mississippi Facilities

Like Texas, Mississippi is one of five Gulf Coast states that remain vulnerable to the effects of hurricanes. Since 1900, Mississippi has been significantly affected by 10 named hurricanes including Hurricane Camille in 1969 Ivan in 2004 and Hurricane Katrina in 2005. According to the US Navy, the hurricane season poses a serious threat to Pascagoula. The hurricane season along the Gulf Coast is late May through early November. During the 107-year period from 1886-1992, an average of one tropical cyclone or hurricane has passed within 180 nautical miles of Pascagoula each year.

Based on the history of this region this area is considered a high to severe exposure to hurricane activity, primarily due to the frequency of significant events based on historical data. History has shown that this area is vulnerable to the occurrence of destructive storm surge associated with tropical cyclones. There have been 13 significant hurricanes exposed to this area (within 65 miles) in recorded history, of which three were Category 4 and one was a Category 5 (Hurricane Camille).

Figure 9: Historical Hurricane Track Storm Surge Data (www.maps.csc.noaa.gov/hurricanes/).



Hurricane Camille was one of the bench marks in the American hurricane experience. Hurricane Camille was one of the most intense storms of any kind to ever strike mainland

America in modern history. At the time, Hurricane Camille produced the highest hurricane tidal surge ever recorded in the United States. According to the U.S. Army Corps of Engineers (Mobile District 1970), a still-water, high water mark, of 22.6 feet above mean tide, was measured.

Hurricane Katrina's winds and storm surge reached the Mississippi coastline on the afternoon of August 28, 2005, beginning a two-day path of destruction through central Mississippi. The storm surge was reported by MSNBC as 28-foot storm surge flooding 6 to 12 miles inland. It was reported that the water surge level in Pascagoula was 18 feet.

Analysis Methodology – Hurricane Wind

This assessment methodology describes the technical resources used to estimate the potential property and business interruption losses at the locations evaluated. The assessment results provide specific information on the estimated exposure to the particular facilities referenced in this report.

The hurricane wind-induced damage assessment was conducted using the "Insurance Risk Assessment System" Risk Search". RiskSearch® is an on-line service database of site-specific property risk information for insurers, reinsurers, banks, real estate companies, public sector organizations, and financial intermediaries. RiskSearch utilizes RMS' Detailed Loss Module (DLM) which simulates natural disaster events using state-of-the-art computer models and sophisticated engineering databases to generate a site specific hazard analysis including an estimate of potential loss using location specific information. This method calculates the probability of losses reaching different damage levels.

RiskSearch is a knowledge-based computer modeling system which interprets the financial risk from catastrophic natural hazards such as earthquakes and hurricanes. RiskSearch is a widely accepted methodology in the insurance industry, and is used extensively by major companies. RiskSearch can analyze the risk to a single location subject to a single hurricane scenario.

Historical storm data indicates that the highest winds in a hurricane are approximately 10 to 12 miles from the center of the eye. Hurricane force winds continue 15 to 25 miles from the center of the eye, and tropical storm force winds exist up to 150 miles from the center of the eye. Winds within a hurricane are generally stronger on the windward (right) side of the storm track. When modeling hurricane damage potential, the model evaluates this information and estimates the peak wind gust speed at the subject site. Projected wind speed, in conjunction with the physical plant location, primary and secondary structural characteristics, and reported property values, are used to evaluate a property damage loss

estimate. The level of physical property damage, in conjunction with the reported business interruption values, is calculated.

Hurricanes are often accompanied by heavy rains and are the cause of much river flooding in inland areas. Exposed locations along the coast will be subject to the effects of intense rain and the hurricane storm surge. The low pressure associated with the hurricane (particularly the eye of the hurricane) causes the ocean water to be uplifted. This effect is enhanced by the wave action and the strong winds.

Analysis Methodology – Hurricane Storm Surge

The extent of inland penetration by hurricane-induced storm surge flooding examined for this report is based on the SLOSH models of the National Weather Service and the 1993 report by Texas A&M University Hazard Reduction and Recovery Center prepared for the Texas Division of Emergency Management. The Texas A&M report provides a series of storm surge maps for the Texas Gulf Coast defining the "Maximum Envelope of Water" (MEOW) for each category of hurricane, based on the SLOSH models. These maps are included in the section "Storm Surge Maps" of this report.

If a hurricane makes landfall during high tide, 1 to 1.5 feet can be added to the storm surge height. To evaluate the worst-case scenario for this study, a high tide condition is considered.

The property damage loss estimates and business interruption loss estimates from the storm surge-induced flooding were determined using the U.S. Army Corps of Engineers 1989 report entitled "Tri-State Hurricane Property Loss Study".

A chart showing the height of a storm surge for a Category 5 hurricane versus time before and after landfall is included in the SLOSH Map section of the report. The height of a storm surge varies inversely to the forward speed of a particular hurricane. For example, the slower the forward speed of the hurricane, the higher the storm surge.

Once the hurricane strikes land and moves inland, it generally recedes in strength since it is no longer being powered by the rising warm, moist ocean air. When this occurs, the remaining tropical storm will release intense rain over the inland area.

Rainfall associated with a hurricane can add to the potential flooding exposure. The maximum rainfall associated with a hurricane, measured in inches, can be estimated by dividing 100 by the forward movement speed, measured in miles per hour, of a hurricane. If this rainfall occurs ahead of the hurricane making landfall, the rainfall and storm surge

would be cumulative. To evaluate the worst-case scenario for this study, the impacts of rainfall associated with the hurricane are considered in the evaluation of storm surge/flood loss estimates developed for this report.

In addition, rainfall alone can cause flooding in historically flood-prone areas along the coast that are not subject to storm surge flooding.

Hurricane Wind & Water Surge Study Limitations

This hurricane wind and storm surge study is developed for risk management purposes only. The historical hurricane tracks selected for this study are models of actual hurricanes documented in the last 100 years. The hurricane modeling effects are hypothetical and the worst-case scenario that can reasonably be expected to occur. The hurricane is postulated to affect the largest concentration of property values for a worst-case, single hurricane event to one location. As with any study of this kind, loss estimates can be significantly affected by small changes in the input parameters and by actual physical characteristics of specific plant facilities. Therefore, the results are only an estimate of the extent or order of magnitude of the potential losses from historical storms. Actual losses may be more or less severe than those made for this study.

Property Damage Loss Estimates developed as a result of this study do not include additional costs, such as debris removal or any secondary damages such as fire, explosion, fines, fees, pollution, extra expense, or other liabilities.

The probability that the wind-induced damage estimated by the Risk Search model will not be exceeded is 90%.

The Property Damage Loss Estimates are developed from computer analysis of statistical and probability information. The estimates represent an average for the many types of occupancies and types of construction encountered. An analysis can be performed for a particular occupancy and construction type if a specific Loss Estimate is desired for a selected site location.

References

CBIZ Valuation Group, LLC. A Summary Appraisal of Tangible Property Assets for Signal International, LLC, Pascagoula, Mississippi as of November 14, 2008. Draft. Dallas: CBIZ, 2008.

National Oceanic and Atmospheric Administration (NOAA). 1 1 2009. 7 1 2009 <http://www.noaa.gov/>.

NOAA Coastal Service Center- Historical StormTracks. 11209. 24 12 200 <http://maps.csc.noaa.gov/hurricanes/viewer.html>.

NOAA. Hurricane Prepareness - National Hurricane Center - Slosh Model. 1 1 2009. 24 12 2008 <http://www.nhc.noaa.gov/HAW2/english/surge/slosh.shtml>.

Risk Management Services. RMS. 1 1 2009. 22 12 2008 <http://www.rms.com/>.

Signal International, LLC. Signal International, LLC. 1 1 2009. 7 1 2008 <http://www.signalint.com/>.

US Federal Emergency Management Agency. FEMA Map Service. 1 1 2009. 24 12 2008 <http://msc.fema.gov/webapp/wcs/stores/servlet/info?storeId=10001&catalogId=10001&langId=-1&content=floodZones&title=FEMA%20Flood%20Zone%20Designations>.

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Location	Building Name	# Bldgs	Sq. Ft.	Year Built	ISO Class	Roof Type	Exterior Walls	Sprinklers	Auto Alarm	Manual Alarms
East Yard	Administration	1	16,484	1998	3-Non-Combustible	Metal	Metal Siding on Metal Studs	100%	Yes	Yes
East Yard	Compressor Building	1	1,407	1985	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
East Yard	Electrical Shop	1	9,378	1995	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
East Yard	Fab Pipe Shop	1	85,175	1985	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
East Yard	Machine Shop	1	14,040	1995	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
East Yard	Maintenance Shop	1	4,633	1995	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
East Yard	North Restroom	1	1,540	1995	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
East Yard	Security And First Aid	1	918	1995	1-Frame	Metal	Metal Siding on Wood Studs	0%	No	No
East Yard	South Restroom	1	1,575	1995	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
East Yard	Warehouse 3	1	19,601	1995	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
East Yard	Blast/Paint	1	11,361	2008	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
East Yard	Rigging Building	1	2,020	1950	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
East Yard	Guard Shack	1	64	2005	1-Frame	Metal	Metal Siding on Wood Studs	0%	No	No
East Yard	Time Clock	1	320	2005	3-Non-Combustible	Flat Membrane	Fiberglass Paneling	0%	No	No
East Yard	Storage	1	80	2005	1-Frame	Metal	Vinyl Siding	0%	No	No
East Yard	Document Control	1	1,880	2008	1-Frame	Metal	Metal Siding on Wood Studs	0%	No	No
East Yard	Warehouse 1	1	18,304	1995	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
East Yard	Warehouse 2	1	19,399	1995	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
East Yard	Quonset	1	1,144	1950	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
East Yard	Safety Trailer	1	572	2005	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
East Yard	Hazardous Waste	1	1,155	1988	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
East Yard	Storage	1	151	1980	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
East Yard	Office	1	1,240	2006	1-Frame	Metal	Metal Siding on Metal Studs	0%	No	No
East Yard	Office	1	500	2006	1-Frame	Metal	Wood Siding on Studs	0%	No	No
East Yard	Office	1	1,232	2006	1-Frame	Metal	Metal Siding on Wood Studs	0%	No	No
East Yard	Office	1	810	2006	3-Non -Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
East Yard	Time Clock	1	311	2008	1-Frame	Metal	Metal Siding on Wood Studs	0%	No	No
East Yard	Guard Shack	1	36	2008	1-Frame	Metal	Metal Siding on Wood Studs	0%	No	No
East Yard	Paycheck Office	1	48	2008	1-Frame	Metal	Metal Siding on Wood Studs	0%	No	No
East Yard	Trailer (3)	1	1,899	2005	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
East Yard	Office	1	147	2005	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
East Yard	Fuel Station	1	487	2005	3-Non-Combustible	Metal	Concrete Block	0%	No	No
East Yard	Superintendent Trailers (6)	1	3,504	2005	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
East Yard	Mechinist Department	1	330	2005	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
East Yard	Pipe Department	1	147	2005	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
East Yard	Office	1	155	2005	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
Resident Housing	Bunkhouses (19)	1	16,416	1992	1-Frame	Metal	Wood Siding on Studs	0%	Yes	No
Resident Housing	Kitchen	1	2,154	1995	1-Frame	Metal	Stucco on Wd Studs, W Siding on Studs	0%	Yes	No
Resident Housing	Laundry	1	864	1989	1-Frame	Metal	Wood Siding on Studs	0%	Yes	No
Resident Housing	Lounge (2)	1	1,728	1989	1-Frame	Metal	Wood Siding on Studs	0%	Yes	No
Resident Housing	Shower	1	864	1989	1-Frame	Metal	Wood Siding on Studs	0%	Yes	No
Resident Housing	Office-Storage	1	425	2006	1-Frame	Metal	Wood Siding on Studs	0%	No	No
Resident Housing	Guard Shack	1	152	2008	1-Frame	Metal	Vinyl Siding	0%	Yes	No
Resident Housing	Lounge/Shower	1	2,795	1995	1-Frame	Metal	Wood Siding on Studs	0%	No	No
Resident Housing	Bunkhouses (2)	1	5,589	1995	1-Frame	Metal	Wood Siding on Studs	0%	No	No
			273,054							
West Yard	Fab Pipe Shop	1	13,276	1998	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
West Yard	Mechanics Shop	1	1,547	1998	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
West Yard	Restroom	1	827	1998	2-Joisted Masonry	Metal	Concrete Block	0%	No	No
West Yard	Warehouse	1	6,150	1998	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
West Yard	Security Building	1	1,000	1998	1-Frame	Metal	Metal Siding on Metal Studs	0%	No	No
West Yard	Electrical Storage	1	434	2008	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
West Yard	Waste Storage	1	760	2005	3-Non-Combustible	Metal	Metal Siding on Metal Studs, None	0%	No	No
West Yard	Compressor Building	1	404	2005	1-Frame	Metal	Metal Siding on Wood Studs	0%	No	No
West Yard	Guard House	1	274	2005	1-Frame	Metal	Metal Siding on Metal Studs	0%	No	No
West Yard	Time Clock	1	208	2007	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No

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West Yard	Production	1	1,904	2006	1-Frame	Metal	Metal Siding on Wood Studs	0%	No	No
West Yard	Fuel Pavillion	1	589	2008	3-Non-Combustible	Metal	Concrete Block	0%	No	No
West Yard	Storage	1	164	1995	5-Fire-Resistive	Flat (Membrane)	Poured Concrete	0%	No	No
Training Building	Office/Training	2	19,203	1997	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
Orange Yard	Blast/Paint	1	25,925	1975	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
Orange Yard	Computer Terminal,Phone Room	1	612	1945	4-Masonry Non-Combustible	Flat (Membrane)	Solid Brick	0%	No	No
Orange Yard	Guard House	1	192	2005	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
Orange Yard	Light Fab Shop East	1	35,240	1942	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
Orange Yard	Fab Shop, NCS Bay 1,2,3	1	215,686	1942	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
Orange Yard	Maintenance Building	1	17,187	1942	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
Orange Yard	Joiner Shop	1	1,440	1960	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
Orange Yard	Paint Storage	1	2,752	1942	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
Orange Yard	Pipe Shop	1	7,049	1942	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
Orange Yard	Pipe Warehouse	1	16,164	1942	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
Orange Yard	Power Plants (13)	1	100	1995	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
Orange Yard	Pre-Assembly	1	68,352	1942	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
Orange Yard	Time Clock Building	1	144	1997	1-Frame	Metal	Wood Siding on Studs	0%	No	No
Orange Yard	Warehouse #1	1	20,567	1942	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
Orange Yard	Warehouse #5	1	19,928	1986	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
Orange Yard	Warehouse #3	1	15,980	1975	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
Orange Yard	Welding Storage	1	1,104	1965	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
Orange Yard	Maintenance Building Drive Through	1	575	1960	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
Orange Yard	Security Housing	1	316	1995	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
Orange Yard	Time Clock, Small	1	64	2005	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
Orange Yard	Assembly Area	1	566	1998	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
Orange Yard	Pit #1	1	22,113	1975	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
Orange Yard	Warehouse #5	1	23,171	2006	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
Orange Yard	Warehouse #2	1	21,590	1975	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
Orange Yard	Light Fab Shop West	1	32,240	1942	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
Orange Yard	Warehouse Joiner	1	6,582	1975	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
Buckley & Son	Office	1	1,265	1993	2-Joined Masonry	Metal	Metal Siding on Metal Studs	0%	No	No
Buckley & Son	Shop	1	12,344	1983	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
Dock Yard, Dry Dock	Dry Dock #1	1	198,141	1943	3-Non-Combustible	None	Metal Siding on Metal Studs	0%	No	No
Dock Yard, Dry Dock	Clock Shed	1	352	1958	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
Dock Yard, Dry Dock	Guard House	1	167	1998	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
Dock Yard, Dry Dock	Tool Repair Room	1	2,581	1984	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
Dock Yard, Dry Dock	Warehouse #1	1	16,930	1998	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	Yes
Dock Yard, Dry Dock	Warehouse #2	1	1,337	1985	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
Dock Yard, Dry Dock	Cafeteria	1	1,421	2006	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
Dock Yard, Dry Dock	Security Hut	1	252	2006	1-Frame	Metal	Metal Siding on Wood Studs	0%	No	No
Dock Yard, Dry Dock	Time Keeper	1	171	2006	1-Frame	Asphalt Shingle	Wood Siding on Studs	0%	No	No
North Yard	Shipping/Receiving	1	4,602	1982	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
North Yard	Repair Shop	1	2,708	1982	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
North Yard	Warehouse	1	6,441	1998	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
North Yard	Guard/Time Clock	1	461	2005	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
South Yard	Guard House	1	131	1998	1-Frame	Metal	Metal Siding on Metal Studs	0%	No	No
South Yard	Main Office	1	3,049	1977	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
South Yard	Pipe Shop	1	4,107	1988	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
South Yard	Safety First Aid	1	638	1977	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
South Yard	Shipping/Receiving	1	638	1977	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
South Yard	Warehouse #1	1	11,430	1968	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
South Yard	Warehouse #2	1	10,416	1968	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
South Yard	Time Clock	1	278	1998	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No
South Yard	Electric Shop	1	3,900	1968	3-Non-Combustible	Metal	Metal Siding on Metal Studs	0%	No	No

Definitions of FEMA Flood Zone Designations (See FEMA website for additional details)

High Risk Coastal Areas

V Zone

Coastal areas with a 1% or greater chance of flooding and an additional hazard associated with storm waves. These areas have a 26% chance of flooding over the life of a 30-year mortgage. No base flood elevations are shown within these zones.

High Risk Areas

A Zone

Areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. Because detailed analyses are not performed for such areas; no depths or base flood elevations are shown within these zones.

Moderate to Low Risk Areas

B/C Zones

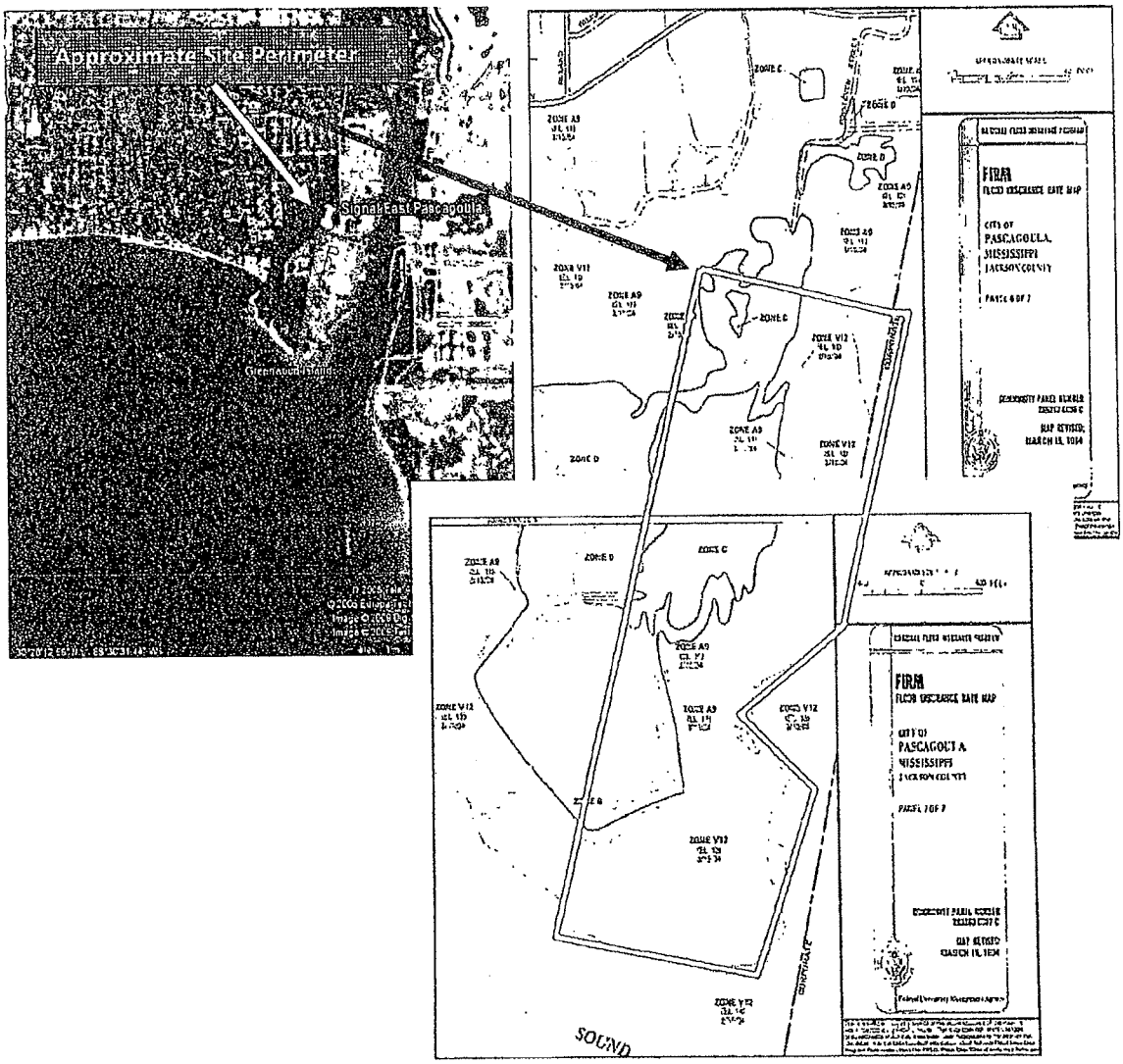
Areas outside the 1-percent annual chance floodplain, areas of 1% annual chance sheet flow flooding where average depths are less than 1 foot, areas of 1% annual chance stream flooding where the contributing drainage area is less than 1 square mile, or areas protected from the 1% annual chance flood by levees. No Base Flood Elevations or depths are shown within this zone. Insurance purchase is not required in these zones.

Flood Zone Discussion - East Yard

601 Bayou Casotte Parkway
Pascagoula, MS 39568

30°20'36.97"N
88°30'54.10"W

The FEMA maps below indicated that the site is in a combination of A, B, C and V Zones. These areas are located in marked elevations by the diagrams below as ranging between 10 – 13 feet (Note the C Zone elevation may be higher than 13 feet). The Administration, Offices, Warehouses 1, 2, & 3, and the Main Camp are located primarily in a C Zone according to the diagrams. It was indicated during the site survey that these areas did not have standing water following Hurricane Katrina. A surge level of 18 feet was recorded at the shore road to the west of this site during Hurricane Katrina. It was observed these areas are an uphill location from the shore yard, fabrication and repair areas of the yard which have standing water in the range of 5 feet during Katrina.

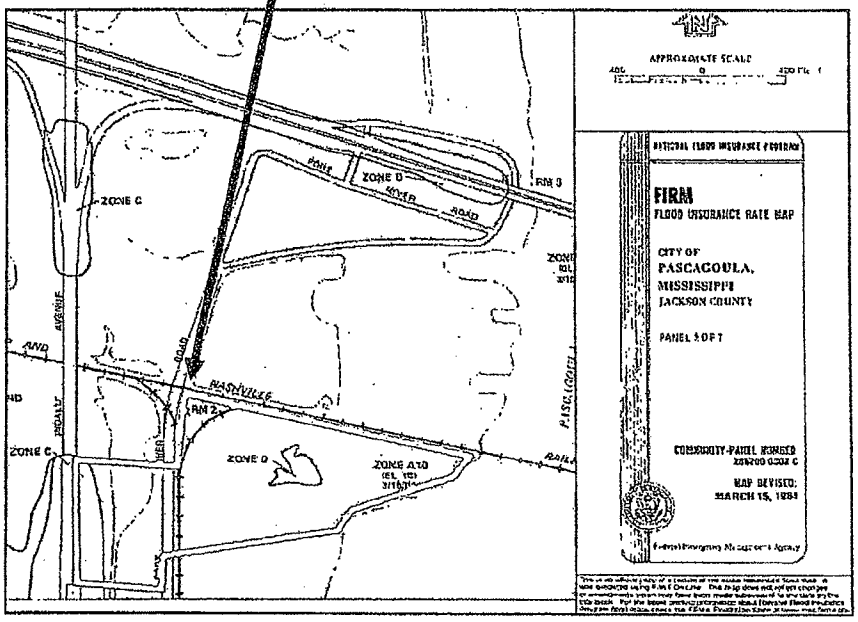


Flood Zone Discussion West Yard

3500 Port Authority Road
Pascagoula, MS 39567

30°22'8.84"N
88°34'8.87"W

The FEMA maps below indicated that the site is in a combination of A, B and C Zones. These areas are located in marked elevations by the diagrams below as 10 feet (Note the Band C Zone elevations are most likely higher than 10 feet). The Training Building is in a C Zone according to the diagram. It was indicated during the site survey that the Training Building did not have standing water following Hurricane Katrina. A surge level of 18 feet was recorded in this area during Hurricane Katrina. It was observed the Training Building is at higher elevation than the West Yard shore yard, fabrication and repair areas.

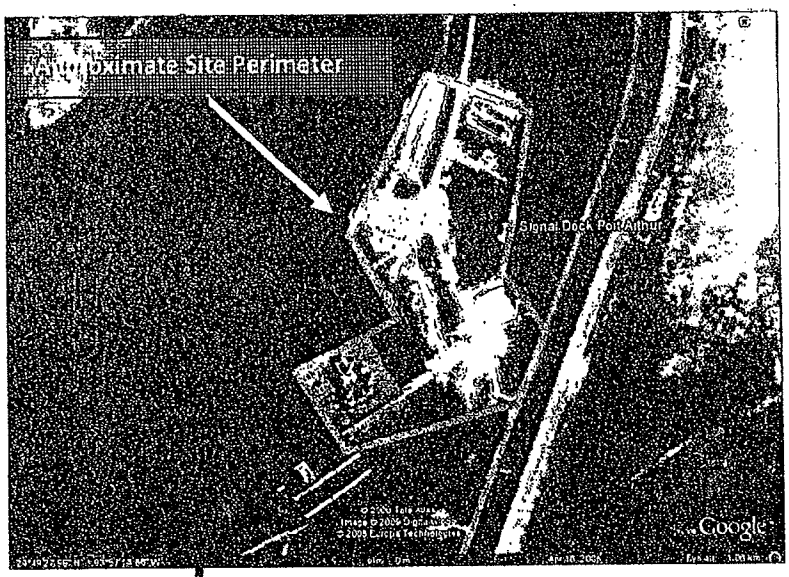


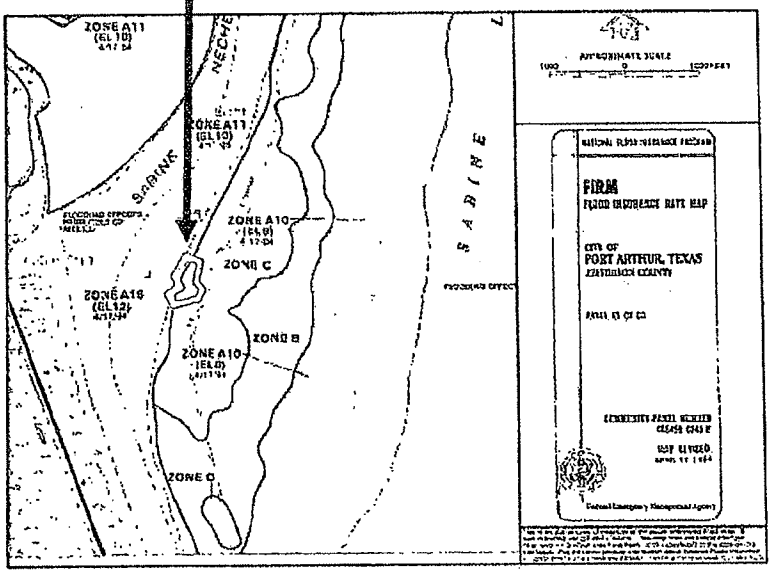
Flood Zone Discussion Dock Yard

2500 Martin Luther King Blvd.
Port Arthur, TX 77640

29°49'30.09"N
93°57'8.29"W

The FEMA maps below indicated that the site is in a combination of A and C Zones. These areas are located in marked elevations by the diagrams below as 10 -12 feet (Note the C Zone elevation may be slightly higher than 10 - 12 feet). It was indicated during the site survey that this area experience relatively little damage from standing water as a result of Hurricane Ike (2008). A surge level of approximately 15 feet was recorded in this area during Hurricane Ike. It was observed that this area overall is relatively flat with a slight slope to the Dry Dock.



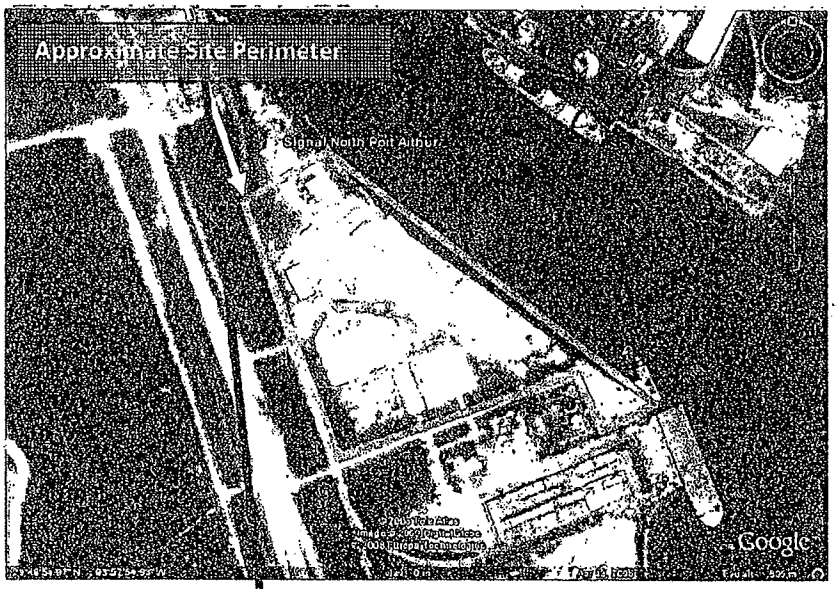


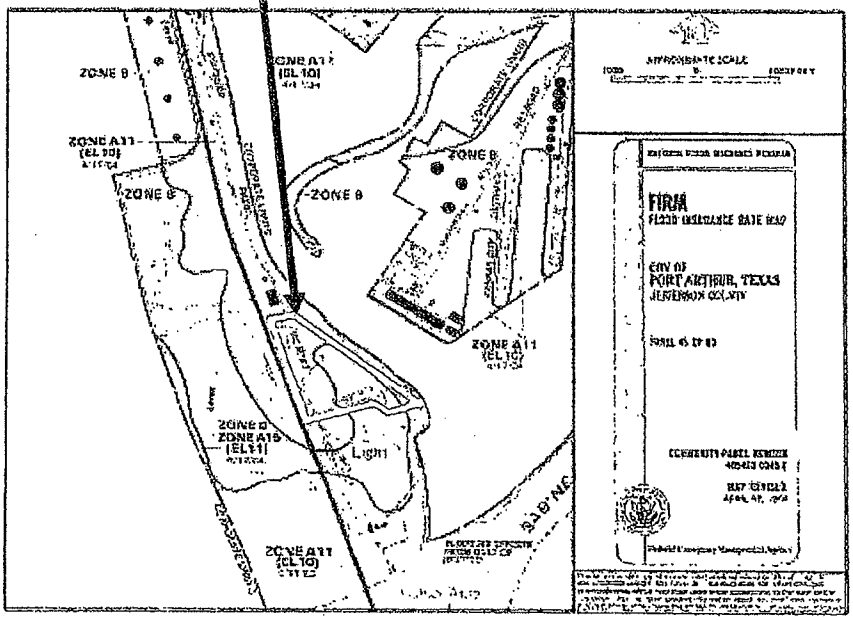
Flood Zone Discussion North Yard

2350 South Gulfway Drive
Port Arthur, TX 77642

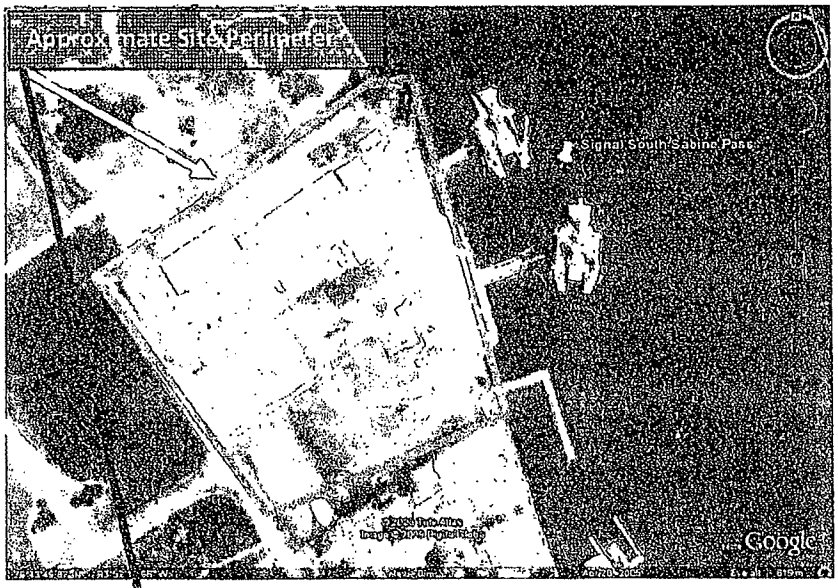
29°49'59.59"N
93°58'1.44"W

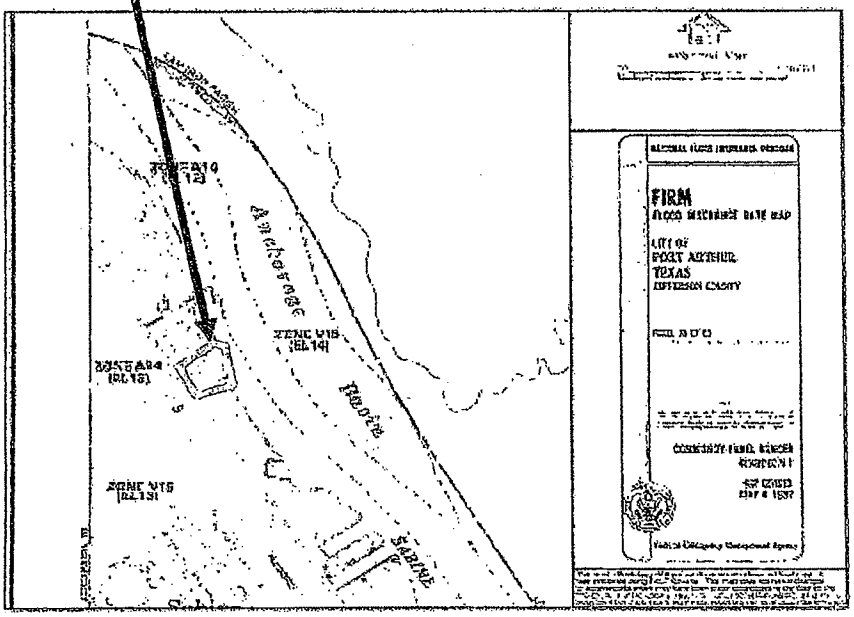
The FEMA maps below indicated that the site is in a combination of A and B Zones. These areas are located in marked elevations by the diagrams below as 10 -11 feet. During the site survey this area experience damage from standing water as a result of Hurricane Ike (2008). A surge level of approximately 15 feet was recorded in this area during Hurricane Ike. It was observed that this area overall is relatively flat to the water shore area.





The FEMA maps below indicated that the site is in a combination of A and V Zones. These areas are located in marked elevations by the diagrams below as 12 -13 feet. During the site survey this area experience damage from standing water as a result of Hurricane Ike (2008). A surge level of approximately 15 feet was recorded in this area during Hurricane Ike. It was observed that this area overall is relatively flat to the water shore area.



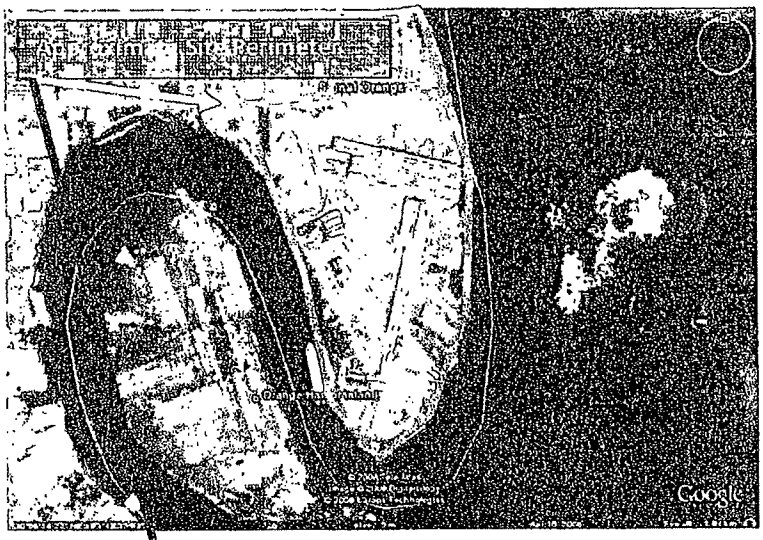


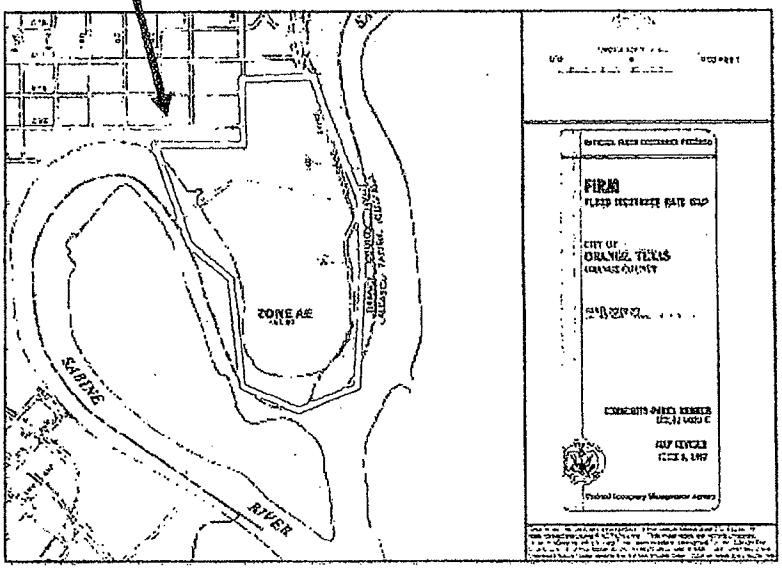
Flood Zone Discussion Orange

91 West Front Street
Orange, TX 77630

30° 5'27.13"N
93°43'40.61"W

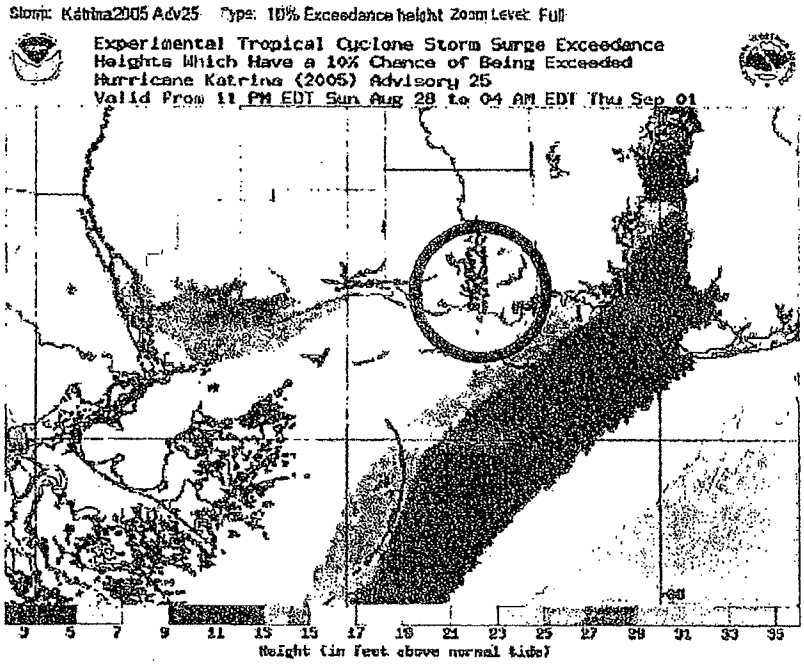
The FEMA maps below indicated that the site is in a combination of A Zone. This area is located in marked elevation by the diagrams below as 8 feet. It was indicated during the site survey that this area experience damage from standing water as a result of Hurricane Ike (2008) in the range of up to 8 feet above ground level. A water level above ground level was reported by the local media as 8 feet in general. Further south of this area surge levels of approximately 15 feet were recorded in the area of the Sabine River during Hurricane Ike. It was observed that this area overall is relatively flat with a slight with minimal slop to the water.





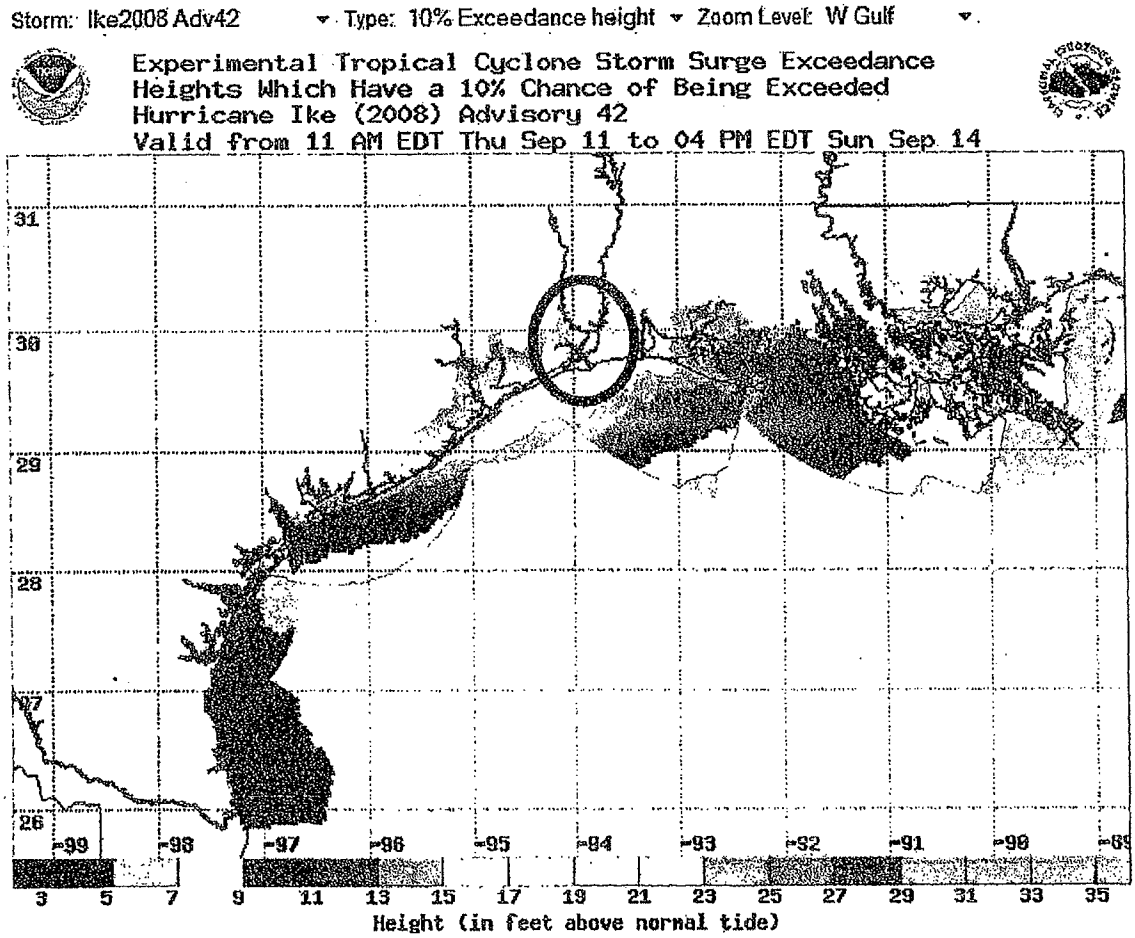
Water Surge Discussion Pascagoula, MS

The following diagram indicates the predicted surge levels prior to Hurricane Katrina's arrival on shore. Note for that the surge prediction for this area ranged of 17ft to 19 ft is accurate.



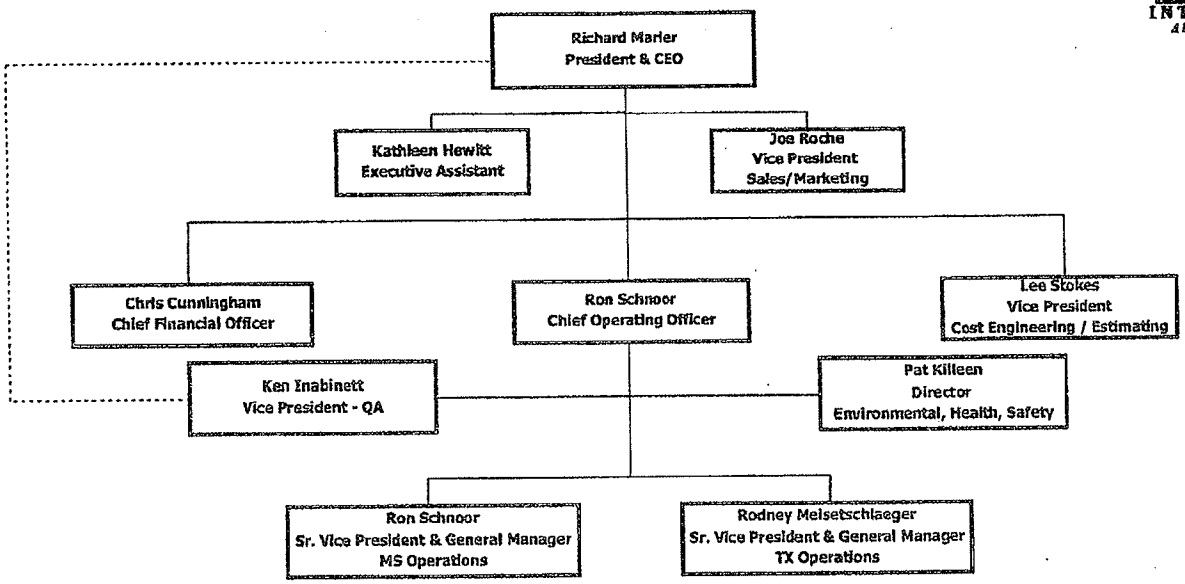
Water Surge Discussion Port Arthur/Orange, Texas

The following diagram indicates the predicted surge levels prior to Hurricane Ike's arrival on shore. Note for the Sabine River areas the surge was predicted in the range of 17ft to 19 ft and 19 ft to 21ft, which was accurate.



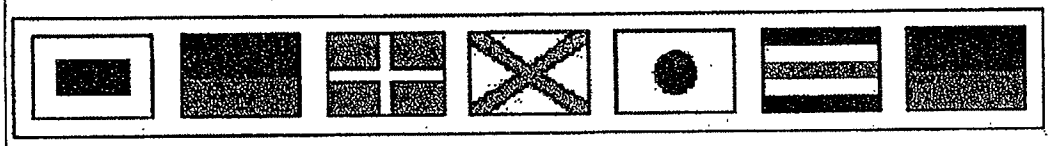
Signal International, LLC

Corporate Organizational Chart



Updated April 2008

SIGNAL



INTERNATIONAL

A Marine & Fabrication Company

MISSISSIPPI OPERATIONS

ENVIRONMENTAL HEALTH AND SAFETY (EHS) MANAGEMENT PLAN

December-07/Rev. 0

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Signal International, Inc.
Environmental Health and Safety Guidelines Manual
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Signal

International

Environmental Health and Safety Guidelines Manual

SIGNAL
INTERNATIONAL
A Marine & Fabrication Company

INCIDENT EVALUATION

INJURY

Minor Injury

- Stabilize Victim - Provide first aid as necessary
- Secure incident scene
- Assist with response efforts as necessary
- Assist as requested
- Notify EHS
- Notify Production Dept. and Project Management
- Assemble incident information
- Conduct a root cause investigation and complete report(s)
- Review incident/Accident report
- Conduct a full management review which includes; senior management and all parties involved in or related to the incident
- Include lessons learned findings for facility-wide distribution

Fatality or Serious Injury

- Stabilize Victim(s); notify rescue services if applicable
- Secure Incident Scene
- Assist with response efforts
- Notify EHS, Signal Senior Management, (Customer Management if applicable) Production Dept. and Project Management. In the event the individual is a sub-contractor, notify the appropriate entity(s).
- Assemble Incident Information
- Conduct a Root Cause (per Fish-Bone analysis protocol) Investigation and Complete
- Conduct a full management review which includes; senior management and all parties involved in or related to the incident
- Develop Lessons Learned Countermeasures to Reduce Incident Reoccurrence
- Produce EHS Alert (can be distributed by either/or email or hard copy) and
- Present lessons-learned in future EHS Training

INCIDENT/INJURY REPORTING/NOTIFICATION FLOWCHART

- Incident/injury Occurs
- Signal EHS notified
- Signal Management/Customer Management notified
- Signal Human Resources notified (for workman's compensation notification)
- In the event the individual is a customer or sub-contractor, notify the appropriate entity. Applicable workmen's compensation carrier notified

SIGNAL

INTERNATIONAL

WHEN COMPLETE, THIS COVER SHEET AND THE BELOW LISTED

INFORMATION SHOULD BE SENT TO:
ORIGINALS*FACILITY FILE
(COPIES) *TRACY BINION - MISSISSIPPI OPERATIONS
(COPIES)*SUSAN CARLQUIST - TEXAS OP'S
(COPIES) *PAT KILLEEN @ SIGNALINTERNATIONAL, MISSISSIPPI OPERATIONS
(COPIES) *APPLICABLE DIVISION PERSONNEL, E.G., PRESIDENT, V.P., ETC.

INCIDENT/ACCIDENT INVESTIGATION INFORMATION
PAPERWORK CHECKLIST

INCIDENT EVALUATION COVER-SHEET ATTACHED ☐

INCIDENT/ACCIDENT INVESTIGATION REPORT ATTACHED ☐

STATEMENT OF THE PERSON INVOLVED IN THE INCIDENT/ACCIDENT ATTACHED ☐

SEPARATE/INDIVIDUAL INVESTIGATION INFORMATION (IF APPLICABLE) ATTACHED ☐

FOREMANS INCIDENT/ACCIDENT REPORT ATTACHED ☐

STATEMENT OF WITNESS(ES) ATTACHED ☐

DRUG TEST PERFORMED (YES/NO) ☐ RESULTS RECEIVED (YES/NO) ☐

OSHA 300 LOG COMPLETED/UPDATED WITH PROPER INFORMATION (YES/NO) ☐

MANAGEMENT REVIEW SCHEDULED (YES/KNO) ☐ DATE

OTHER INCIDENT/ACCIDENT INVESTIGATION INFORMATION ATTACHED (PLEASE LIST)

SIGNATURE OF THE INDIVIDUAL COMPLETING THIS INFORMATION:

/

DATE

NOTES:

SI-EHS # 008/REV. 0

SIGNAL INTERNATIONAL
A Marine & Fabrication Company

Incident Investigation Report

☐ **Report only (for informational purposes; no injury, no material damage)**

Injury: _____ Property Damage: _____ Near hit: _____

Project Being Worked: _____

Specific Location of Incident: _____

Date of Incident: _____ Day of Week: _____ Time of Incident: _____

Employee Name: _____

Badge #: _____ Date of Hire: _____ Craft: _____

Foreman: _____ General Foreman: _____

Superintendent: _____

Category: ☐ Employee ☐ Visitor

☐ Customer Company Name: _____

☐ Subcontractor Company Name: _____

Length of Employment at time of Incident: _____ Time in Occupation at time of Incident: _____

Consecutive Days Worked prior to Incident: _____

Severity of Injury: ☐ Medical Treatment / Recordable ☐ Medical Only ☐ Restricted

☐ Medical Treatment / Non-Recordable ☐ LTA

Type of Property Damaged: _____ Witnesses: _____

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INTERNATIONAL

FIRE RESPONSE/EMERGENCY ACTION PLAN
- insert rig/location -

TABLE OF CONTENTS

Incident Description As Reported:

Describe what Investigation Revealed (USING THE FISHBONE ANALYSIS PROTOCOL AS A GUIDANCE):

Root Causes of Incident following Investigation:

Corrective Actions Taken to Prevent Reoccurrence:

Disciplinary Actions:

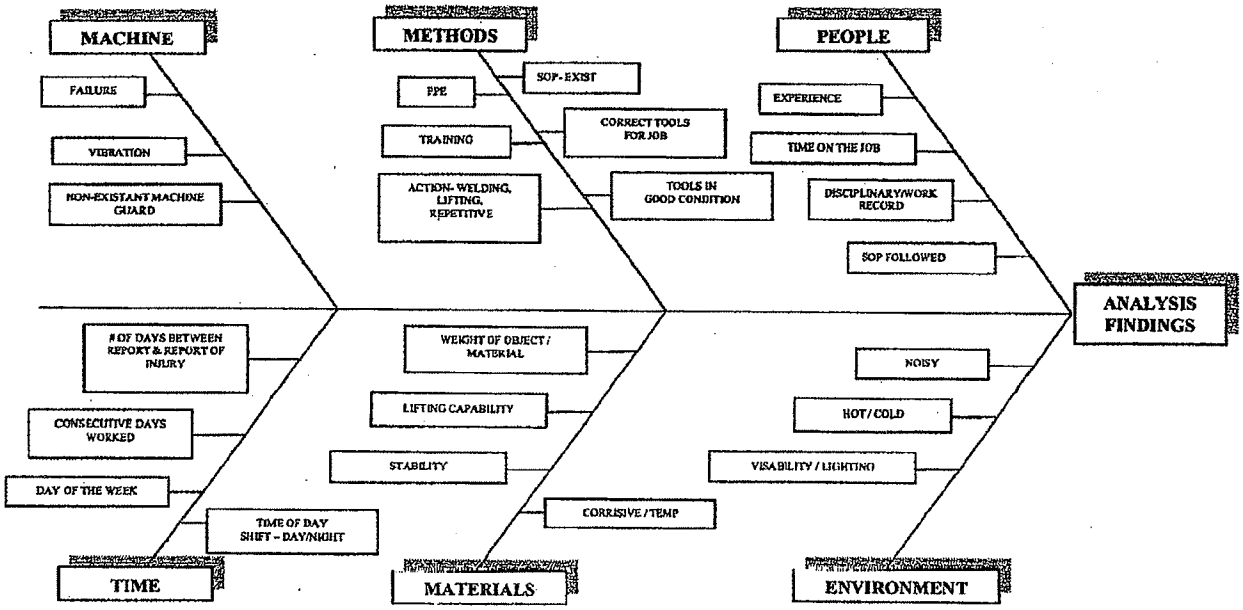
Completed by: _____ **Date:** _____

Approved by: _____ **Date:** _____

Attachments included:

- ☐ **Statement of person involved in the incident**
- ☐ **Statement of witnesses**
- ☐ **Foreman's incident report**
- ☐ **Fishbone analysis protocol**

FISHBONE ANALYSIS PROTOCOL



INVESTIGATION NOTES:

SIGNAL INTERNATIONAL
A Marine & Fabrication Company

FOREMAN'S INCIDENT / ACCIDENT REPORT

Fill in all blocks (mark N/A if applicable) Date of Report:_____

Claimant's Name: _____ Company:_____

Claimant's Social Security # _____ Badge #: _____

List of employees involved in incident:

1. _____ Dept.:_____ Badge:_____
2. _____ Dept.:_____ Badge:_____
3. _____ Dept.:_____ Badge:_____
4. _____ Dept.:_____ Badge:_____
5. _____ Dept.:_____ Badge:_____

What were your instructions to the employees prior to the incident?

_____

_____

_____

_____

Describe in detail what happened?

_____

_____

_____

_____

What equipment was involved?

1. _____
2. _____
3. _____
4. _____

Foreman's Signature:_____ Date:_____

SIGNAL INTERNATIONAL
A Marine & Fabrication Company

STATEMENT OF PERSON INVOLVED IN ACCIDENT / INCIDENT

Date:_____

Job No.:_____ Job Name:_____

Employee Name:_____ Badge No.:_____

Foreman:_____ Buddy (If new hire): _____

What were your instructions for the task you were performing? _____

_____

_____

_____

Who instructed you on the task you were performing?: _____

Please describe below, in your own words, the facts concerning the incident: _____

_____

_____

_____

_____

(Use reverse for additional comments)

_____ _____

Signature Print Name

_____

Date

SIGNAL INTERNATIONAL
A Marine & Fabrication Company

Accident/Incident-Statement of Witness

Date:_____

Job No.: _____ **Job Name:** _____

Employees Name:_____ **Badge No.:**_____

Please describe below, in your own words, the facts concerning the incident that occurred on_____.

_____

_____

_____

_____

_____

_____

_____

What were your instructions on how to perform the job, before you started work the day of the accident?

_____

_____

_____

_____

_____

_____

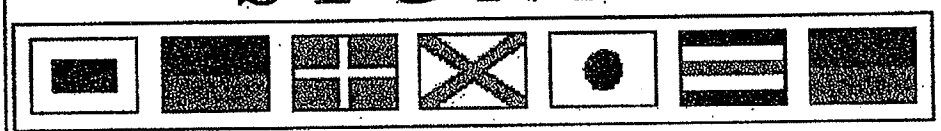
_____ _____

Witness' Signature Witness' Printed Name

_____

Date

SIGNAL



INTERNATIONAL

A Marine & Fabrication Company

Job Risk Analysis
&
Permit to Work System

Job Risk Analysis Process

1. Before the start of a task that will take place within a Signal International facility on a rig or other marine vessel, supervisors (craft superintendents) must conduct a Job Risk Analysis (JRA) with their employees to identify the hazards and controls associated with the job to be performed.
2. When a job is identified, the first action is to establish what tasks it will involve. This initial appraisal should identify the need for any special safety requirements and identify if the task can or cannot be carried out safely. If the likely hazards cannot be reconciled at this stage, then the task should be rejected or redefined.
3. The next stage involves identifying the hazards associated with the tasks, assessing the risks and identifying the controls/precautions required to mitigate those risks. Where a task comprises a number of separate activities, these should be broken down into individual tasks and assessed separately. The extent of the controls identified will depend upon the level of risk associated with the task. **THE HIGHER THE RISK, THE GREATER THE DEGREE OF CONTROL. This task risk assessment process is documented on a Job Risk Analysis (JRA) form and one copy is given to the Signal International EHS (Safety) Department and the second copy is retained by the craft for use before performing the same job in the future.**
4. A new risk assessment will not be required for every job. Where a job has previously been assessed, or is covered by a procedure, it may not need a new risk assessment. Where this is the case, the previous assessment or procedure should be reviewed to ensure that the hazards and controls are still relevant and that any site or job specific controls are identified. Risk assessments are reviewed and renewed every 30 days.
5. For **VERY** low-risk jobs performed by competent/knowledgeable employees, no formal recorded risk assessment is required as the individual's competency and skill assist in the completing of the task in a safe manner.
6. Prior to undertaking the job, the appropriate approval should be obtained along with a discussion of the job in a toolbox meeting between the supervisor and employees who will carry out the job. The supervisor and craft superintendent are responsible for determining if the job has been previously risk assessed or if this is a new job that requires a new risk assessment. If it has been previously assessed, the hazards, controls and individual responsibilities are then communicated from the original JRA to the entire work team. **Where the team identifies any additional hazards and controls (especially those specific to the site and the local conditions), the JRA is then updated as appropriate. If the job has not been previously assessed, a Job Risk Analysis is performed and similarly reviewed with the entire work team, with a copy given to the EHS Department as in Section 3.**
7. Once the task commences, the worksite should be monitored for any change in conditions that might alter the hazards and controls in place. If there is any concern, **STOP THE WORK**, re-assess the controls and, if necessary, re-plan and re-assess the task.
8. On completion of the task, it is important to capture any lessons learned and make improvements to the JRA for the next time the job is performed.

A. The principal responsibilities of Managers, Foreman and Superintendents are to:

Complete the SI JRA Request form and issue one copy of the form to the SI-EHS Department.

*Eliminate and reduce risks wherever practicable

*Combat risks at source

*Ensure suitable and sufficient assessment of all risks to the health and safety of their employees, or any third parties, caused by their work activities

*Ensure that assessments are recorded, reviewed and maintained as valid

*Ensure that an appropriate approval process is in operation, commensurate with the level of the risk assessed

*Give appropriate information, instruction and training to employees and ensure competence of involved personnel

B. The principal responsibilities of Front-line Supervision are to:

*Review and identify what level of risk assessment each job is required

*Ensure that all jobs undertaken within their area of responsibility are assessed to identify any hazards.

*Ensure that control measures are implemented to reduce the likelihood of a risk occurring to as low as reasonably practicable

*Reject or redefine the activity if residual risk is too high after being reduced to as low as reasonably practicable

*Ensure that any potential improvements highlighted during the assessment process are reviewed and actions taken as appropriate

*Communicate details of the Job Risk Analysis to the work team, allocating individual responsibilities for job tasks and control measures-EACH MEMBER OF THE WORK TEAM MUST SIGN THE JRA ACKNOWLEGING THAT THEY UNDERSTAND THE WORK AND ASSOCIATED HAZARDS

*Ensure that all members of the work team have the opportunity to identify further hazards and controls during the pre-job toolbox meeting using the JRA

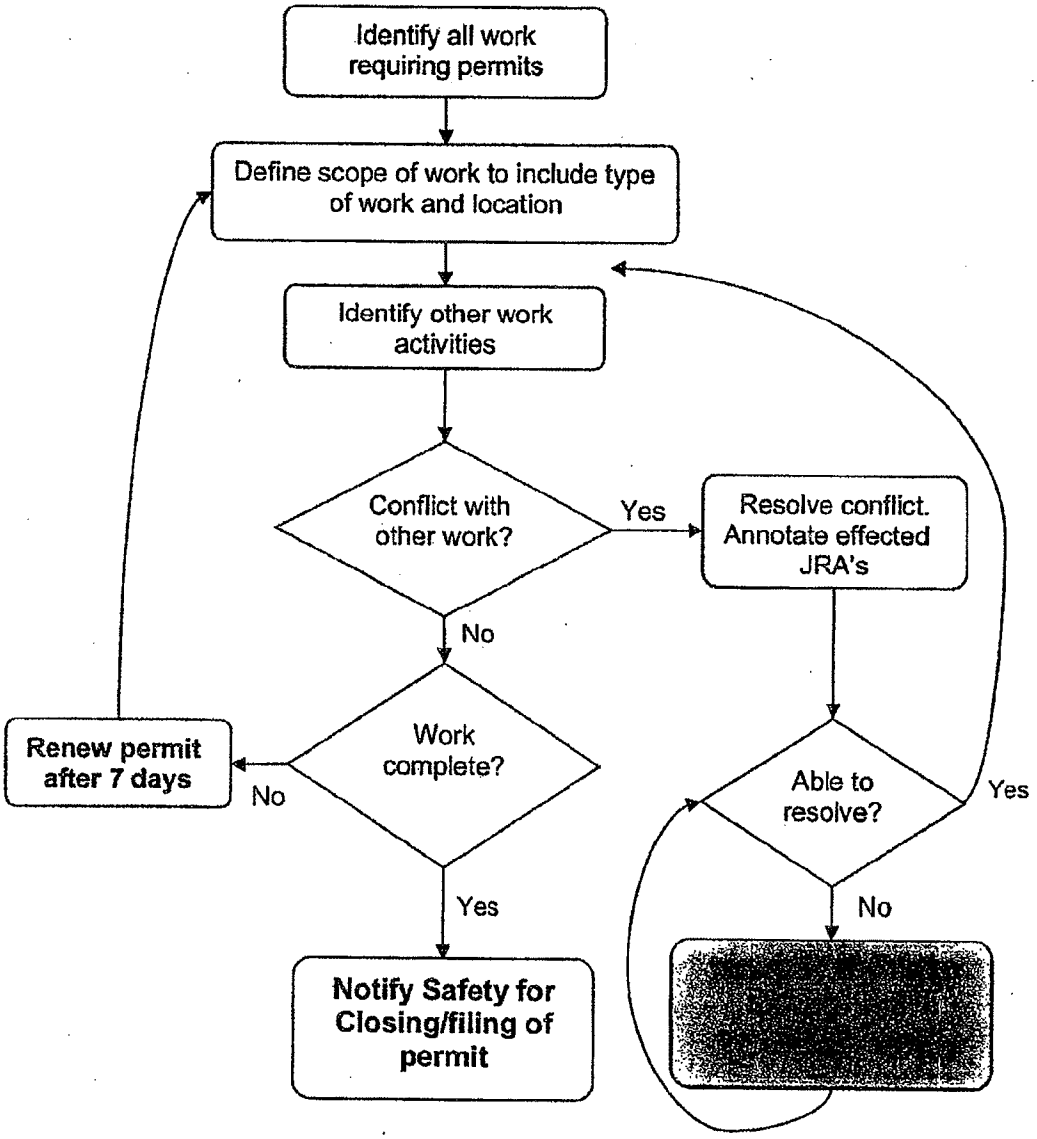
*Ensure that before work commences all members of the work team are in agreement with the detail of the JRA and the proposed control measures and that they are reminded that anyone has both the authority and responsibility to stop the job if there is a doubt about the safety of the operation

*Post the appropriate work performance package at the job site

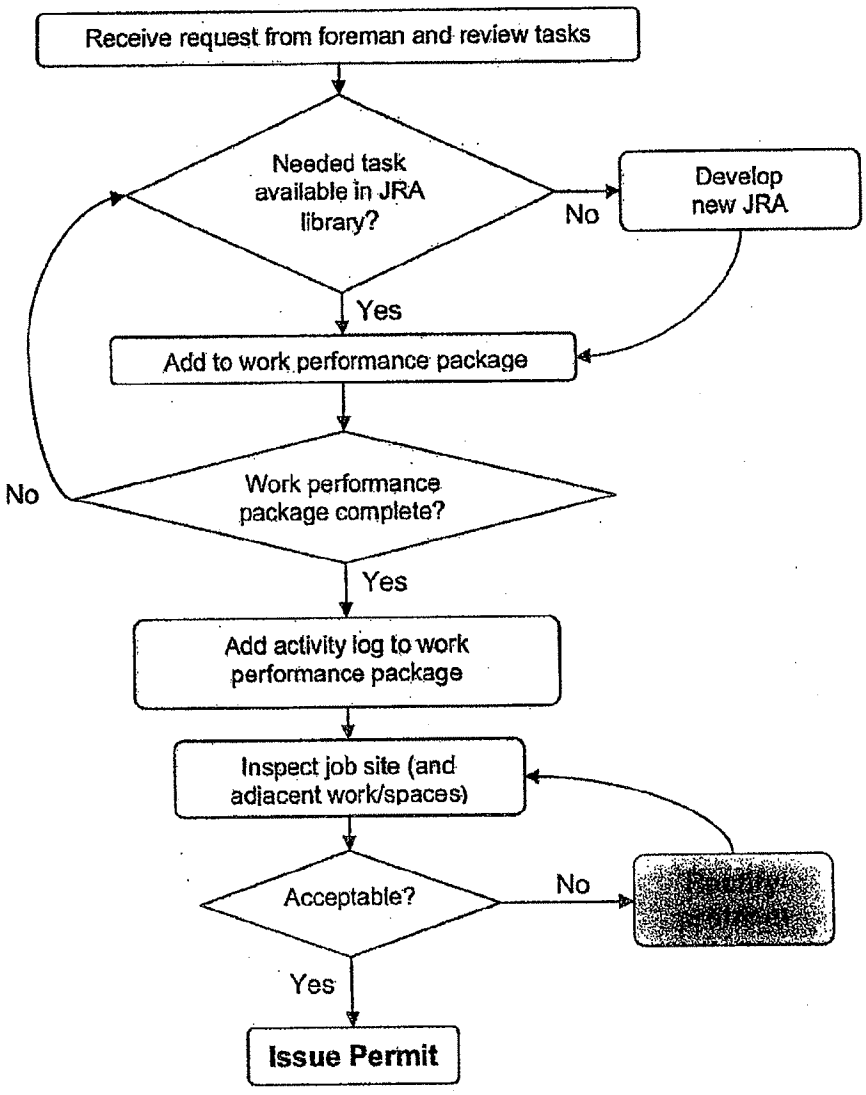
*Return the work performance package to the daily JRA meeting for review and updating

*At the completion of the JRA meeting, the work performance package is returned and posted at the job site and reviewed with the applicable/impacted employees

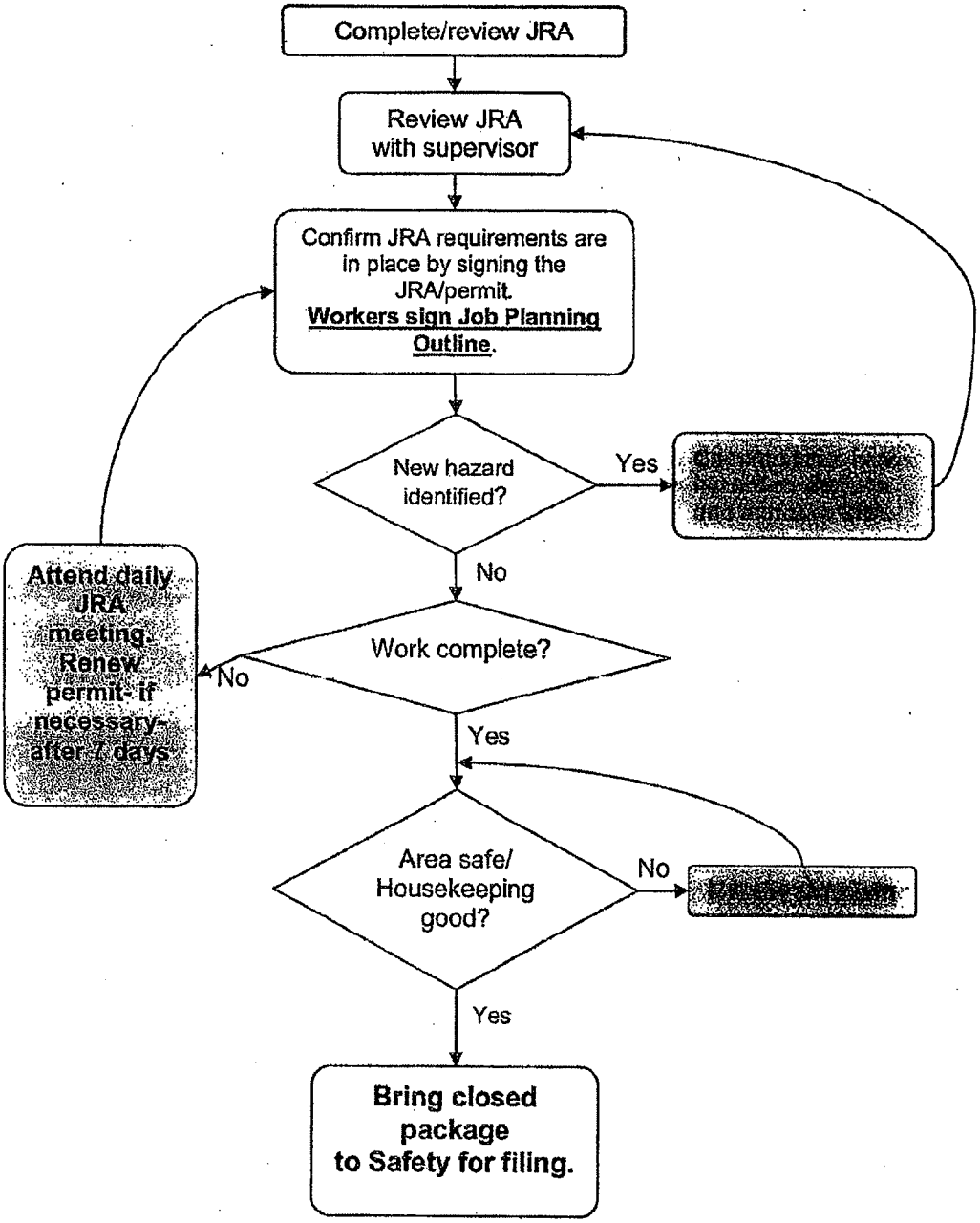
INITIAL JRA OBLIGATION
PROJECT SUPERINTENDENT RESPONSIBLITIES



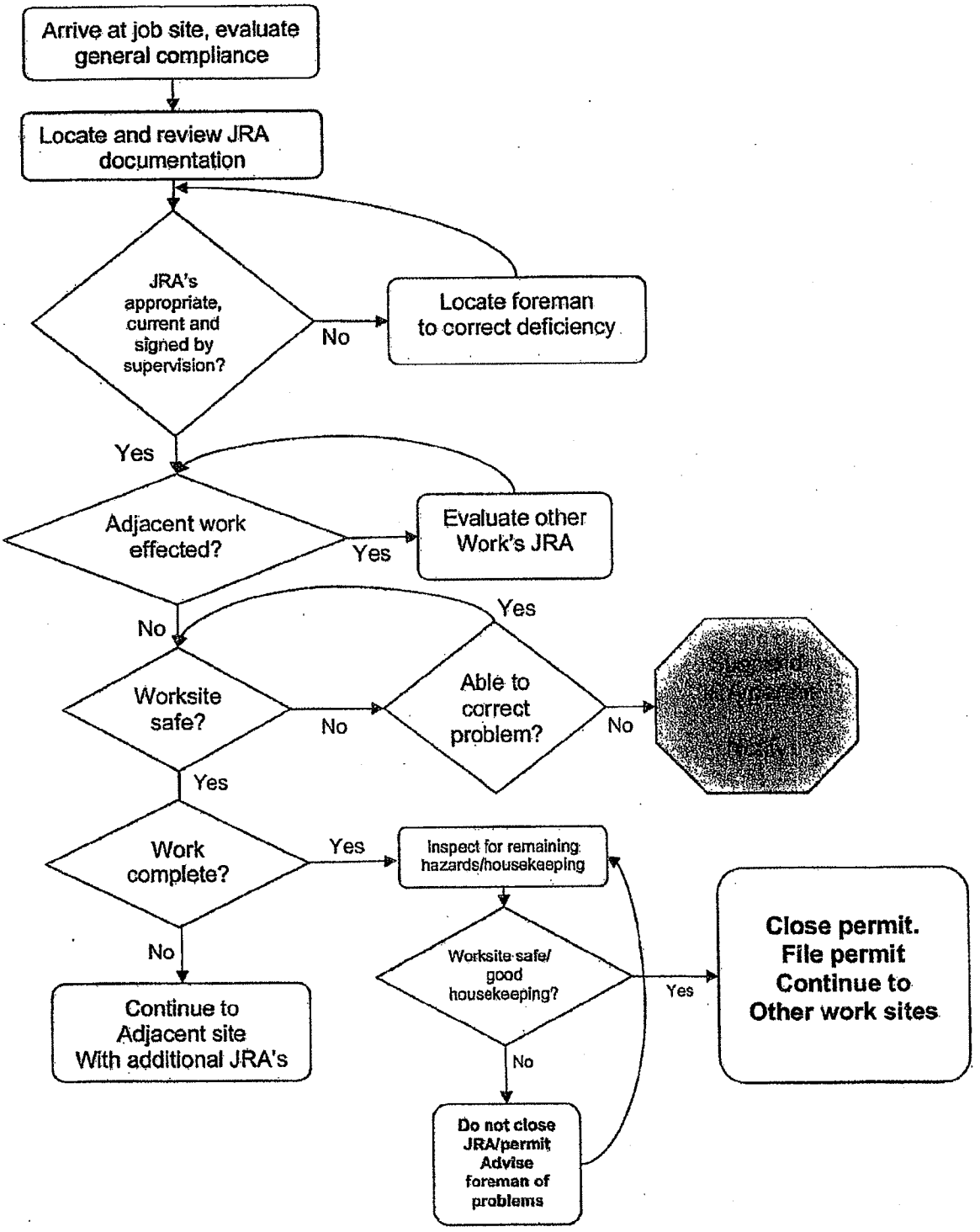
JRA ISSUANCE
SAFETY REP RESPONSIBILITIES



JRA IMPLEMENTATION
FORMAN/SUPERVISOR RESPONSIBILITES



JRA FIELD EVALUATION
SAFETY REP RESPONSIBLITIES



Permit To Work System

Section No. 1 – Purpose and Scope

A Permit-to-Work system has been established to assist in controlling all hazards associated with fabrication activities conducted at all Signal International operations. The purpose of this process is to create a system of communication among the personnel involved in carrying out potentially hazardous work and to ensure that risk of injury and damage is fully managed. These work practices are intended to provide guidelines for the implementation of the Permit-To-Work system and to establish a structure for working within written Permits-To-Work. The scope of this procedure is for all activities performed onboard rigs or other similar marine vessels, and/or activities that have significant risk (i.e. heavy lifts) at Signal International facilities. Certain activities, once evaluated by the execution of a 'Job Risk Analysis', will not require a permit. These activities will be determined on a case-by-case basis, pending the completion and subsequent review of the Job Risk Analysis.

Described below are the levels of authority, responsibility and actions required by the relevant entity in order to complete the issuance of the Permit-To-Work:

Section No. 2 – Responsible Authority (Project Superintendent)

The Responsible Authority is responsible to manage and administer the Permit-To-Work system, including ensuring that participating personnel are aware of the requirements of the permit and are competent to perform the specific job-task required to complete the work in a safe, environmentally friendly and efficient manner. The Responsible Authority will oversee all ongoing operations and planned activities to ensure conflicts and increased risks are not caused by concurrent activities. The Responsible Authority, in conjunction with the EHS (Safety) Department is responsible for the overall coordination of the Permit-To-Work system. In order to efficiently administer the PTW system, the Responsible Authority can delegate authority if/when applicable.

The Responsible Authority shall ensure that:

- Prior to performing work, all work requiring permits are identified and the Job Risk Analysis documents are completed and/or reviewed
- Each permit shall contain a clear description of the work to be done and it's location
- PTW activities that may interact or affect one another are clearly and effectively cross-referenced.
- A coloring system will be used to easily identify specific hazards and/or activities within a permit or permit area. The system will be as follows:
    - RED DOTS will be placed on a permit if the activities contained within the permit include/involve HOT WORK
    - YELLOW DOTS will be placed on a permit in the activities contained within the permit include/involve COLD WORK
    - BLUE DOTS will be placed on a permit in the permitted activity will be performed rig/vessel wide (this would include certain maintenance activities, certain scaffold building activities, etc.)
- PTW validation, via project activity meetings, will be conducted at a specified project location on a daily basis (this time-frame can/will vary when work is not performed due to weekends/holidays/rainouts, etc.)
- Permits will not exceed a 7 day period (this time-frame can/will vary when work is not performed due to weekends/holidays/rainouts, etc.)
- All other work, which would create a hazard if undertaken at the same time, is made safe and/or suspended.
- That a review of the work scope, JRA and inspection of the work site is completed daily (this time-frame can/will vary when work is not performed due to weekends/holidays/rainouts, etc.)

Section No. 3 – Issuing Authority (EHS-Safety Department)

The Issuing Authority shall be the Signal International, EHS (Safety) Department. They shall assist in/be responsible for:

- Review Job Risk Analysis to ensure all hazards associated with the proposed task being identified and listed
- All safety measures and/or equipment that are required for the job incorporated in conducting the task
- That the persons conducting the work are aware of the precautions to be taken during the active period of the permit
- That no work will commence until the permit has been approved in writing by both the Responsible and Issuing Authority
- Inspection of the work site.
- Notifying the Responsible Authority/Management if/when a permit is suspended and the conditions surrounding the permit suspension
- Periodically during the operation, reviewing the Job Risk Analysis as to their continued applicability to the job task.
- Permits are validated and/or re-issued every 24 hrs. (This time-frame can/will vary when work is not performed due to weekends/holidays/rainouts, etc.)
- That all permits are displayed in the work area in a manner that they can be read/reviewed by the employees.

Section No. 4 – Performing Authority

The Performing Authority is the front-line supervisor (Foreman or other frontline supervisor) authorized to carry out the work within the Permit-To-Work parameters. Prior to performing the work activity, the Performing Authority will:

- Complete/review a Job Risk Analysis to understand the potential hazards associated with the permitted work, and must review the Permit-To-Work and the JRA with their employees performing the work.
- Confirm that all requirements of the Permit-To-Work are in place by endorsing the permit with his signature
- Be able to recognize signs or symptoms of exposure to the anticipated hazards, and understand the consequences of exposure to those hazards to all employees in the work area
- Maintain communication with all personnel when/if a hazard in the work space develops
- Assist all employees in the exiting of the work area as quickly as possible whenever ordered or alerted to do so
- Assure compliance of all conditions of the work permit by the employees performing the work.

Job Risk Analysis/Permit To Work Forms

JRA REQUEST FORM

DATE TO BEGIN WORK: _____

FOREMAN: _____

CRAFT: _____

JOB #: _____

LOCATION OF WORK: _____

BRIEF DESCRIPTION OF WORK: _____

_____

_____

_____

_____

_____

SIGNATURE: _____

DATE OF REQUEST: _____

SI-EHS FORM #001/REV.0

Job Planning Outline

Date:
Craft:
Supervisor:

Task Equipment

No.	Equipment Name/Type	Inspected?	Inspected by:

Task Participants

No.	Name	Position	Task Performed Before?
FIREWATCH			

Task Procedure

Step	Task Detail	Who Performs	Supervised by:

SI-EHS #002/REV. 0

SIGNAL INTERNATIONAL
A Marine & Fabrication Company

Permit No. _____

PERMIT TO WORK – JRA(s) must be completed prior to issuance of PTW

Person In Charge of the Work: Position:

Location: _____

Type of Work Performed: ☐ **Hot Work** ☐ **Confined Space Entry** ☐ **Lockout/Tagout** ☐ **Special rigging event** ☐ **Elevated scaffold work (Above 5 ft)** ☐ **Other** _____

Brief Description of Work:

_____

_____

_____

Starting Time: **Date:** **Expiration Time:** **Date:**

The following areas / items have been evaluated and are required for the work:

	Atmospheric Hazards		Hazard Controls		PPE		Miscellaneous
	Oxygen content: 20.8 %		Mechanical Ventilation	X	Face / eye protection		Portable Radio
	LEL : < 10%		Fluid / Gas Free		Fall protection		Lighting
	H2S : < 10 PPM		Lockout / Tagout	X	Gloves		Tripod / Harness
	CO: < 35 PPM		Fire Watch needed	X	Hearing Protection		OTHER:
	OTHER:		Portable gas detector		Air purifying respirator		
			Barricades/signs/labels		SCBA		

Employee sign-in:

_____ _____ _____

_____ _____ _____

_____ _____ _____

Check the type of hazards associated with this work permit:

	Explosive gases / vapors		Sudden release of energy	X	Slipping / tripping / falling		Poor visibility
	Poisonous gases / vapors		Confined space		Overhead work		Other (on back)

PERMIT VALIDATION – 7 DAY MAXIMUM

☐-Day One ☐-Day Two ☐-Day Three ☐-Day Four ☐-Day Five ☐-Day Six ☐-Day Seven

EHS
Initial _____ _____ _____ _____ _____ _____ _____

PRODUCTION
Initial _____ _____ _____ _____ _____ _____ _____

Permit suspension: ☐ Yes ☐ No Reason: _____

Suspended by: _____ Time: _____ Date: _____

Re-activated by: _____ Time: _____ Date: _____

Permit approval: _____ **(Production)**

_____ **(EHS)**

PERMIT CLOSE-OUT SIGN-OFF:

Work is - ☐ completed - ☐ not completed **Site is in a - ☐ safe condition**

Housekeeping is - ☐ completed **Normal operations - ☐ may be resumed**

NEW PERMIT ISSUED ☐

Closure approval: _____ **(Production)**

_____ **(EHS)**

SI-EHS FORM #003/REV.0

SIGNAL INTERNATIONAL
A Marine & Fabrication Company

Example only

JOB RISK ANALYSIS

TO BE COMPLETED BY THE EHS DEPT
JRA #

LOCATION:		TASK:	Welding,Cutting Brazing	DATE:
How to use this form:				ANALYSIS PERFORMED BY:
1. Crew Performing task review ALL hazard considerations.	2. Review any previous JRA update(s) for useful information, which will help this task.	3. Carry out task per plan. If any conditions change, STOP and RE-ASSESS !!!!!!	4. Keep one copy of the JRA for future reference. Submit one copy to the EHS (Safety) Dept. for recordkeeping. Update this JRA as needed	

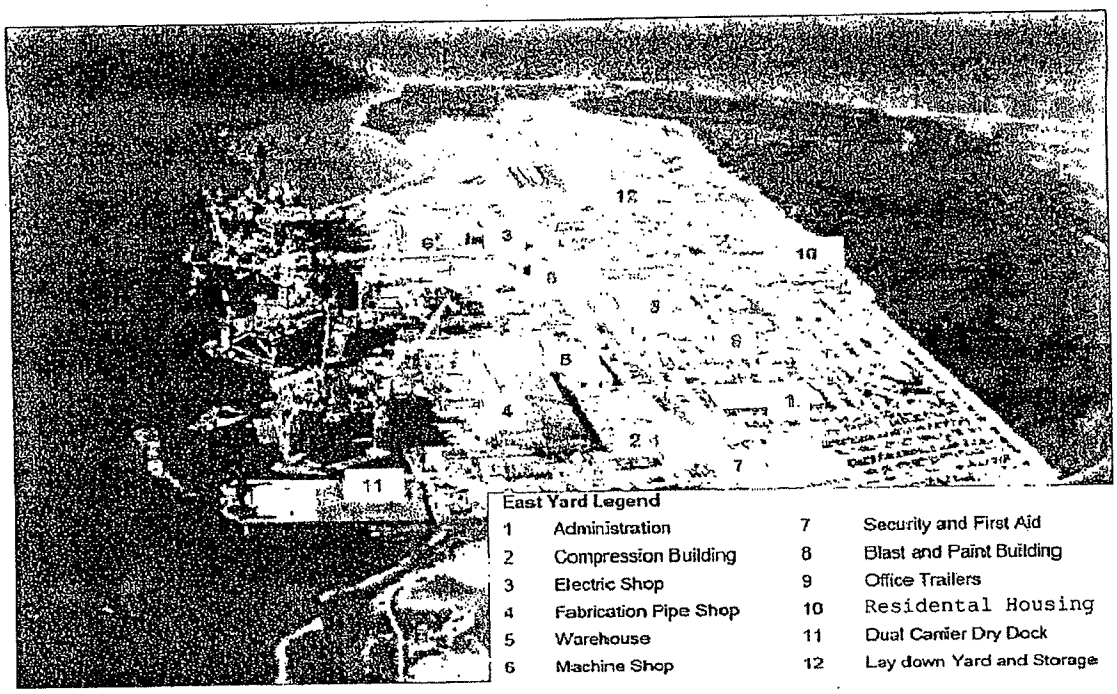
STEP #	DESCRIPTION	POTENTIAL HAZARD	CONTROLS/ACTION TAKEN TO MANAGE HAZARD
9	Barracade	Not barracadeing the hot-	Pos proper barracade around your hot work area to keep
		work area off can result in	unauthorized personnel out.
		accidents/injuries.	All Barracade "shall" be removed when task is complete.
10	Break, Lunch & End Of Shift	Not removing gas lines from	All gas lines shall be removed from all spaces at break
		confined spaces can result in	lunch & end of shift & removed from the manifold.
		serious bodily injuries.	
			* In the event of an emergency contact your supervisor
			or the safety Department. Also contact the
			Rig Manager.
11	call a timeout	Not calling a time out when	Always call a "timeout" when there is an unsafe act taking
		there is an unsafe act going	place in your work area. Stop the usafe action to prevent
		on in the work area can cause	injury and accidents.
		bodily injury and accidents.	

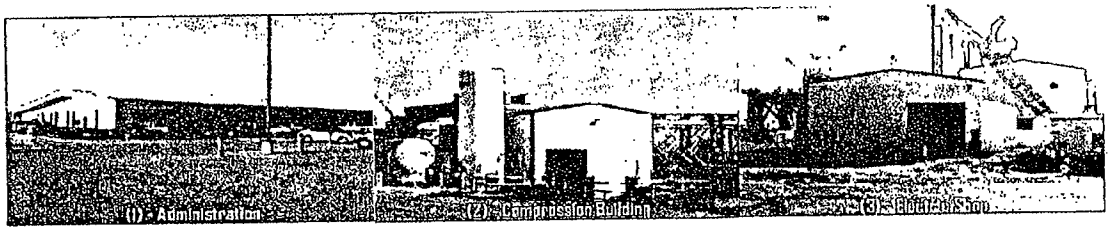
*USE BACK OF FORM IF NECESSARY TO COMPLETE LISTING TASK

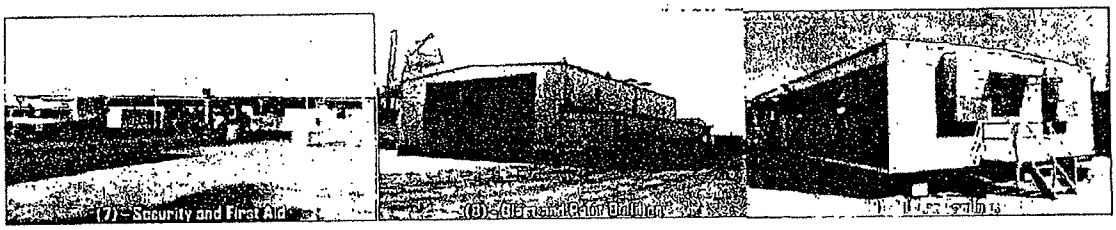
EHS DEPT REVIEW

REVIEWED BY:	
DATE:	

SI-EHS #004/REV. 0







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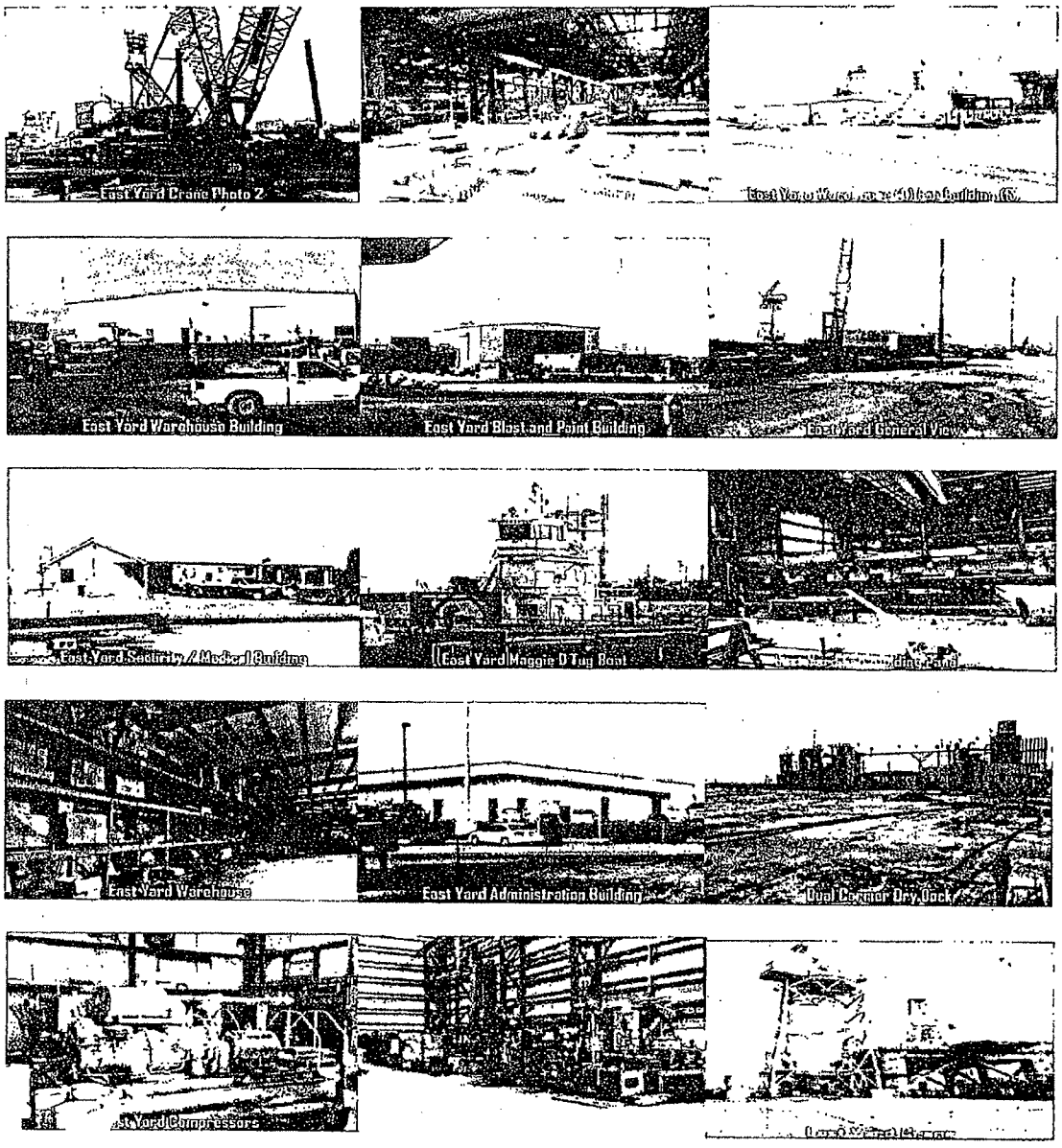
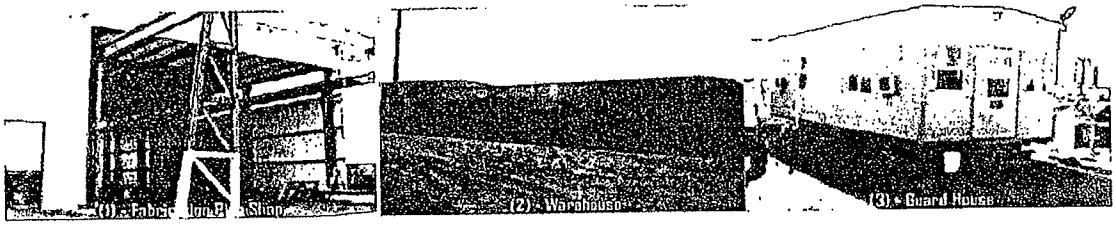
(12) - No Photograph Available

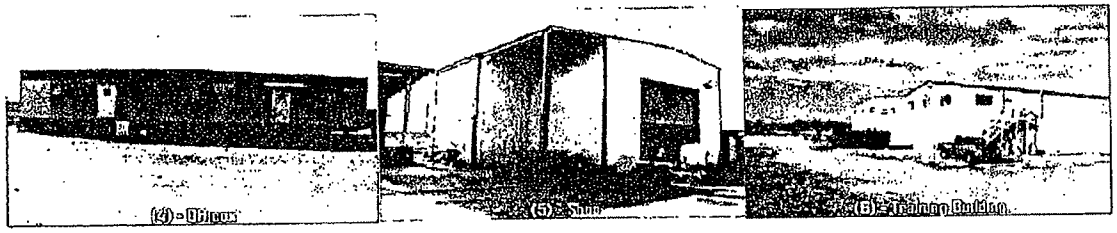
Other Photographs



West Yard Legend (Primary Buildings)

1 Fabrication Pipe Shop
2 Warehouse
3 Guard House
4 Offices
5 Shop
6 Training Building





Other Photographs